INDIANA RAIL PLAN

Indiana Department of Transportation
Multi-Modal Transportation Division

Prepared by:

PARSONS

In association with:

Gibson & Associates

Kimley-Horn and Associates

USI Consultants, Inc.

OCTOBER 2002

Table of Contents

LIST OF TABLES

LIST OF FIGURES

INDIANA RAIL PLAN

1.0 INTRODUCTION

1.1 Overview

Indiana has 4,255 railroad route miles, of which 91 percent are operated by Class I railroads, principally CSX Transportation, Inc. (CSXT) and Norfolk Southern (NS). The remaining miles are operated by 37 regional, local, and switching & terminal railroads. CSXT operates 1,929 miles and Norfolk Southern operates 1,569 miles. Other Class I railroads in Indiana are the Canadian National and the Soo Line, a Canadian Pacific Railway subsidiary, as well as Amtrak, which owns 18 miles of line in Indiana, part of its Michigan line service.

In 1999, approximately 100.1 million tons of rail freight was originated and/or terminated in Indiana. Nearly two-thirds of this traffic consisted of coal and primary metal products. Other major commodity groups include farm products, scrap metal, and chemicals. Approximately 65 percent of rail freight moving in Indiana is bridge traffic—that is, interstate freight traffic that neither originates nor terminates in the state.

Short line railroads in Indiana are a vital element of the state's rail network, serving 62 counties, 15 of which are served only by short lines. Indiana short lines in 1999 handled nearly 350,000 carloads of various commodities, mostly in conjunction with the large Class I freight railroads.

Since the issuance in 1995 of the last Indiana State Rail Plan, the competitive structure of the railroad industry in Indiana has undergone significant changes. The most dramatic change was the acquisition of Conrail by CSX Transportation, Inc. and Norfolk Southern Corporation.

The principal assignment of Conrail assets in Indiana to CSXT was the St. Louis – Terre Haute – Indianapolis/Avon – Muncie – Cleveland route. The competitive effect of the assignment, agreed to by CSXT and NS prior to their control application to the U.S. Surface Transportation Board (STB), was to substantially reduce rail-to-rail competition in the Indianapolis area, going from two Class I railroads to one. To remedy this competitive defect, CSXT and NS agreed to trackage rights access to Indianapolis shippers by NS on two CSXT routes, one from Anderson, the other from Lafayette. CSXT was also assigned the Fort Wayne line of Conrail, a route of relatively low traffic density via Warsaw and Plymouth. This line also serves as relief capacity to CSXT's double-track route across northern Indiana via Walkerton and Auburn. NS has trackage rights on the CSXT Fort Wayne line.

The principal assignment of Conrail assets in Indiana to Norfolk Southern is the Chicago line via Elkhart, South Bend, and Burns Harbor. Other assignments include the Marion Branch between Goshen and Anderson; the Kankakee line (accessing the Northern Indiana Public Service Company plant at Wheatfield); and the Kalamazoo line between Elkhart and Michigan points. Fort Wayne continues to be the system hub of NS Triple Crown Services, utilizing RoadRailer® technology and Indiana's last Class I railroad Division headquarters.

The formal assumption of operating control of Conrail properties took place on June 1, 1999. The initial transition of operating control was problematic. For example, Norfolk Southern experienced information management system integration failures that greatly reduced the velocity of traffic across its system. The large classification yard at Elkhart, IN, was one of the major bottlenecks on the NS system as the interrupted flow of data hampered car classification and, consequently, train dispatchments. Service on both NS and CSXT was gradually restored to normalcy in the year 2000.

A significant environmental provision of the Conrail acquisition involves agreements, approved by the STB, between CSXT and the cities of Gary, East Chicago, Whiting, and Hammond, IN, which mitigates rail/highway grade crossing impacts on the CSXT Barr Subdivision between Pine Junction in Gary and the Illinois state line, six miles. The reduction or possible elimination of through freight trains on this line segment would involve the upgrade of a grade-separated line known as the Dune Park Branch, operated by the Indiana Harbor Belt Railroad. Upgrade of this branch would also improve the fluidity of rail freight operations in the area by the elimination of rail lines crossing at grade, including the NS Lake Division main line. The four cities are currently studying the feasibility and cost effectiveness of this possible routing option.

Canadian National Railway (CN) has a relatively minor presence in Indiana, operating 81 miles in northwest Indiana via South Bend and Valparaiso, neither originating nor terminating traffic of any significant volume by rail. Nevertheless, CN is one of the heaviest-traffic-density lines in Indiana, with an average of 32 freight trains per day between Detroit/Port Huron and the Chicago area. CN was privatized in 1995 with an initial public stock offering. It acquired, with STB approval, the Illinois Central Railroad in 1999 and the Wisconsin Central System in 2001.

Canadian Pacific Railway, through its Soo Line subsidiary, owns and operates approximately 94 route miles between Terre Haute and Bedford. This line segment is connected to Chicago and Louisville by trackage rights on CSXT and NS.

Rail passenger service in Indiana is conducted by two operating entities: Amtrak and the Northern Indiana Commuter Transportation District (NICTD), known as the SouthShore Line. Amtrak serves 13 stations in Indiana, with eight named trains on five routes. At two of these stations, Indianapolis and Connersville, all service occurs between midnight and 4 a.m.

NICTD operates about 37 weekday electric trains, with fewer on weekends, between Chicago – Randolph Street Station and various points in Indiana, including Gary, Michigan City, and South Bend. In 1990, NICTD completed the purchase of the operating assets of the former Chicago, SouthShore, and South Bend Railroad following its entering bankruptcy in 1989. Freight service is provided under contract on the NICTD line by SouthShore Freight (CSS), a unit of Anacostia and Pacific Corporation.

In March 2001, NICTD issued the West Lake County Corridor Major Investment Study, which examined proposed commuter service routes. These routes would incorporate the use of the former Monon Corridor from Hammond to Munster, then continue either to Valparaiso on right-of-way owned by CN or to Lowell on right-of-way owned by CSXT. The recommended, locally preferred alignment is the Valparaiso route on CN, which it is estimated would generate about 3,775 inbound morning peak riders in the year 2020.

In May 2001, one of the United States' largest railroad/highway grade crossing elimination projects was completed in Lafayette, IN, after many years of planning and construction. A total of 42 grade crossings and a section of street running were eliminated through line relocation in this decades long project involving two NS and one CSXT line through Lafayette. The CSXT line is also used by Amtrak trains between Indianapolis and Chicago.

In terms of future intercity rail passenger service, Indiana would be served by the Federal Railroad Administration's presently designated high-speed routes between the western hub at Chicago and Detroit, Cleveland, Cincinnati, and Louisville. These routes are part of the Midwest Regional Rail Initiative, a cooperative, multi-agency effort to develop an improved and expanded network. This proposed 3,000-mile network includes a fleet of trains operating up to 110 mph. The capital investment required is about $4.1 billion, and the plan forecasts revenues sufficient to cover annual operating costs.

1.2 Trends and Developments

Intermodal transportation of containers/trailers will continue to be the principal area of growth for the railroad traffic base. In addition to CSX intermodal terminals at Indianapolis and Evansville, and NS Triple Crown Services at Ft. Wayne, intermodal shippers in certain areas of Indiana will continue to rely significantly on railroad intermodal terminals in adjacent states. These terminals include Chicago, Louisville, Cincinnati, and Toledo. Hoosier Lift in Remington, IN, near I-65, on the Toledo, Peoria, and Western Railway is expected to remain a relatively small part of the intermodal market.

Dry bulk commodities will continue to shift from cars with a capacity of 263,000 lbs. to rail cars with a capacity of 286,000 lbs. gross weight on rail (GWR). Some short line mileage could be threatened with abandonment as a result, particularly route mileage serving small volume agribusinesses, if the capital funds for the necessary line upgrades cannot be obtained. If the trend toward unit trains at high volume, high-speed grain terminals in the upper Great Plains states spreads to Illinois and Indiana, significant abandonments of short line mileage dependent on grain traffic may result. While such terminals can double the productivity of covered hopper railroad cars and locomotives and provide shippers with lower rail rates, they can also result in heavier trucks traveling greater distances on local roads.

With the exception of the future abandonment of some stub-end, very low traffic density mileage in Indiana, the rationalization of the rail network in Indiana that began in the 1970s is accomplished. In the year 2000, less than one route-mile was abandoned. In the year 2001, 10.8 route-miles were abandoned. However, some of the earlier abandonments, such as the former Big Four route of the New York Central System between Chicago and Indianapolis, now deprive Indiana of valuable network links, as the need for rail capacity for high-quality intermodal and passenger service has increased. The present NS route between Chicago and Cincinnati, via Fort Wayne and Muncie, is a predominantly single-track route, nearly 40 miles longer than the former Big Four route via Indianapolis.

Without a restructuring of intermodal rail service offerings, it is unlikely that there will be appreciable diversion of truck traffic from Indiana highways to rail. As long as rail carriers perceive that handling intermodal traffic with a line haul of less than 400 to 500 miles is inherently unprofitable, diversions to rail from the largest trucking segment will be inconsequential. Thus markets such as Gary/Cincinnati, Muncie/Detroit, and Indianapolis/Chicago will remain truck-dominated, since railroads estimate that too little line-haul revenue is available relative to terminal and drayage expenses for truck pick-up and delivery at the shippers' facilities.

Nevertheless, NS does offer its bi-modal trailer Triple Crown Services between Fort Wayne and St. Louis, MO, a distance of about 340 miles. NS does not, however, offer Triple Crown Services between Fort Wayne and its terminals at Chicago, Detroit, or Toronto. Another technology, known as Expressway, is utilized by Canadian Pacific Railway (CPR) for intermodal service between Toronto, ON, and Montreal, QC, a line-haul of about 330 miles. CPR offers the service with reserved space, twice each day, to common and private carriers. CPR's Expressway service does not require reinforced intermodal trailers. Certain short haul markets in Indiana may be attractive for non-conventional intermodal, such as Expressway and RoadRailer®. Such markets typically require several large base load shippers and a relatively balanced traffic flow between terminals, circumstances that are usually not readily available.

Rail routes, either existing or abandoned, selected for high-speed passenger service present an opportunity for expanded, high-quality intermodal freight service.

2.0 CURRENT RAIL SYSTEM IN INDIANA

The current rail system in Indiana is structured to primarily handle east-west traffic flows across northern Indiana to and from Chicago, across central Indiana through Indianapolis, and across

southern Indiana between Louisville and St. Louis. These routes are primarily double-track. The north-south routes through Evansville (CSXT) and Muncie (NS), while carrying substantial traffic, are primarily single-track. The east-west routes carry nearly four times the traffic volume of the north-south routes.

CSXT has the two secondary main lines with comparatively modest traffic levels. These are both east-west lines, one in the north, the other in the south. The CSXT route between Fort Wayne and Chicago carries about 2 million gross tons annually. CSXT's line segment between Lawrenceburg and Vincennes on the Cincinnati/St. Louis route carries about 17 million gross tons on the west end between Mitchell and Vincennes. This is primarily traffic between Louisville and Chicago/St. Louis. East of Mitchell, the traffic is about 9 million gross tons annually. Figure 2-1 presents an overall picture of Indiana's railroad traffic density.

2.1 Indiana Regions, Network and Traffic Base

As stated above, rail traffic flows primarily east-west on the Indiana rail network. There are effectively seven east-west rail corridors in Indiana. Four corridors are in northern Indiana, one (CSXT) in central, and two in southern Indiana. Table 2-1 indicates these corridors and route miles within Indiana, as well as the 1999 gross ton-mile density of each, and certain capacity-related data.

Table 2-1 Indiana East-West Rail Corridors

RR	Line Segment	IN Miles	GTM's (million)	Main Tracks	Train Control	MAS Freight	ATR Clearance
CSXT	Willard, OH and Chicago, IL	145	85	2	TCS	60	HCDS
CSXT	Muncie, Indianapolis and Terre Haute	164	30	2	TCS	60	HCDS
CSXT	Cincinnati/ Louisville and St. Louis via Mitchell	105/63/63	8/10/17	1	DTC/DTC/ TCS	60/40/60	HCDS
NS	Toledo, Elkhart and Chicago, IL	153	130	2-3	TCS	50	HCDS
NS	Fort Wayne, Claypool and Chicago, IL	151	44	1	TCS	60	HCDS
NS	Butler, Fort Wayne, Lafayette and St. Louis/Kansas City, MO	185	32	1	TCS	60/50	HCDS
NS	Louisville, KY and St. Louis, MO	119	23	1	ABS-TO	45/50	HCDS

Abbreviations: GTM-gross ton miles per mile, TCS-Traffic Control System, DTC-Direct Train Control by dispatcher, ABS-Automatic Block System, MAS-maximum authorized speed in mph, ATR-above the rail, HCDS-high cube double stack (9'6") containers.

CSXT's Fort Wayne/Chicago line acquired in the Conrail transaction is used primarily for local traffic, as well as to provide relief capacity when necessary.

The three principal north-south rail lines in Indiana are CSXT's Chicago and southeast service route and Norfolk Southern's Fort Wayne/Cincinnati and Elkhart/Cincinnati routes, both via Muncie. Table 2-2 indicates these corridors and route miles within Indiana, as well as the 1999 gross ton-mile density and certain capacity-related data.

Figure 2-1 Railroad Traffic Density in Indiana

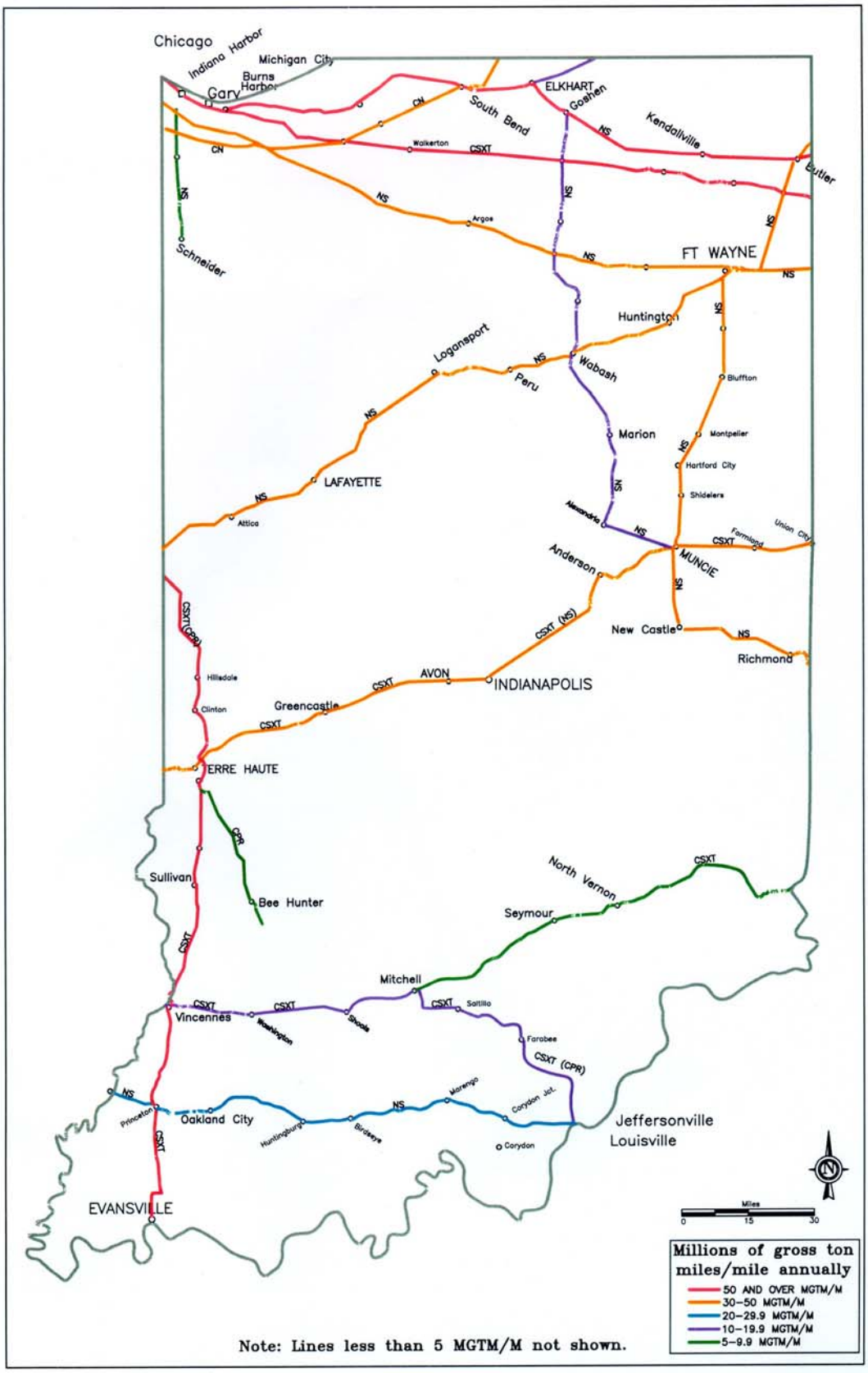


Table 2-2 Indiana North-South Rail Corridors

RR	Line Segment	IN Miles	GTM's millions	Main Tracks	Train Control	MAS Freight	ATR Clearance
CSXT	Chicago and Evansville	152	50	1	TCS	60	HCDS
NS	Elkhart and Cincinnati via Alexandria and Muncie	164	11	1	TCS	45-50	HCDS
NS	Fort Wayne and Cincinnati via Bluffton and Muncie	97	30	1	TCS	60	HCDS

For abbreviations, see preceding Table

Network Vertical Clearances

The vertical clearance on the six east-west and the three north-south routes, plus the Canadian National, all accommodate high-cube double-stack containers.

Freight Traffic

In 1999, 58.7 million tons of freight traffic originated in Indiana, of which 41 percent was coal. In 1999, tons terminated totaled 69.1 million, of which 65 percent was coal. Since the addition of originated tonnage and terminated tonnage would double-count tonnage that both originated and terminated in Indiana, it is necessary to subtract intrastate rail tonnage, which totaled 27.6 million tons in 1999. The result is that 100.1 million tons either originated, terminated, or both in Indiana in 1999. Of the Indiana intrastate rail tonnage, 75 percent was coal traffic. Freight traffic originating and terminating in Indiana is indicated in Table 2-3.

Table 2-3 Indiana Rail Freight Commodities in 1999

(Tons in Millions)

Tons Originated			Tons Terminated		
Coal	24.2	41 percent	Coal	42.5	61 percent
Primary Metal Products	11.6	20 percent	Primary Metal Products	8.1	12 percent
Farm Products	9.9	17 percent	Chemicals	4.7	7 percent
Food Products	4.2	7 percent	Waste and Scrap	4.2	6 percent
Waste and Scrap	2.5	4 percent	Petroleum	2.3	3 percent
Automotive Equipment/Parts	1.4	2 percent	Lumber / Wood Products	1.2	2 percent
All other	4.9	9 percent	All other	6.1	9 percent
Total	58.7	100 percent	Total	69.1	100 percent

Source: Association of American Railroads

According to the Association of American Railroads, 5.7 million carloads were handled through Indiana, including originating or terminating traffic, intrastate, and overhead/bridge traffic. After subtracting Indiana origin and destination traffic, which totaled 1.2 million carloads, a balance of 4.5 million carloads, or 79 percent, passed through Indiana, having origins and destinations outside of the state. Thus, approximately 21 percent of Indiana rail traffic has an origin, termination, or both in Indiana. Total Indiana rail traffic since 1996 is shown in Table 2-4.

Table 2-4 Indiana Rail Freight Traffic, 1996–1999

	1996	1997	1998	1999
Carloads (millions)	5.1	5.3	5.4	5.7
Net Tons (millions)	239.1	251.4	261.2	266.4

Source: Association of American Railroads

Market shares for individual railroad companies' originating and terminating traffic is indicated in Table 2-5. Relative to the few route miles owned in Indiana, the significant market share of Soo Line/Canadian Pacific Railway is accounted for by its coal mine access in Greene County. This coal traffic is very short haul intrastate.

Table 2-5 Estimated Indiana Market Shares by Railroad Company-1999

	Carloads Originating		Carloads Terminating	
Railroad	Percent	Number	Percent	Number
Norfolk Southern	42	301,547	36	277,521
CSXT	26	186,681	23	180,436
Soo Line/Canadian Pacific	17	123,575	10	76,535
Elgin, Joliet & Eastern	9	61,900	13	101,740
Indiana Rail Road	2	16,468	4	27,000
Chicago, SouthShore & S.B.	.8	6,036	5	36,445
Others	3	23,808	9	71,411
Total	100	720,015	100	771,088

Source: U.S. STB Rail Waybill Sample

Canadian National had an inconsequential number of carloads either originate or terminate in Indiana, and those are included in the above data as part of "Others."

Included in the above traffic data are nearly 50,000 intermodal trailers/containers, the majority of which is traffic handled by CSXT at its two intermodal terminals in Indiana, at Indianapolis and Evansville.

2.1.1.1 Coal

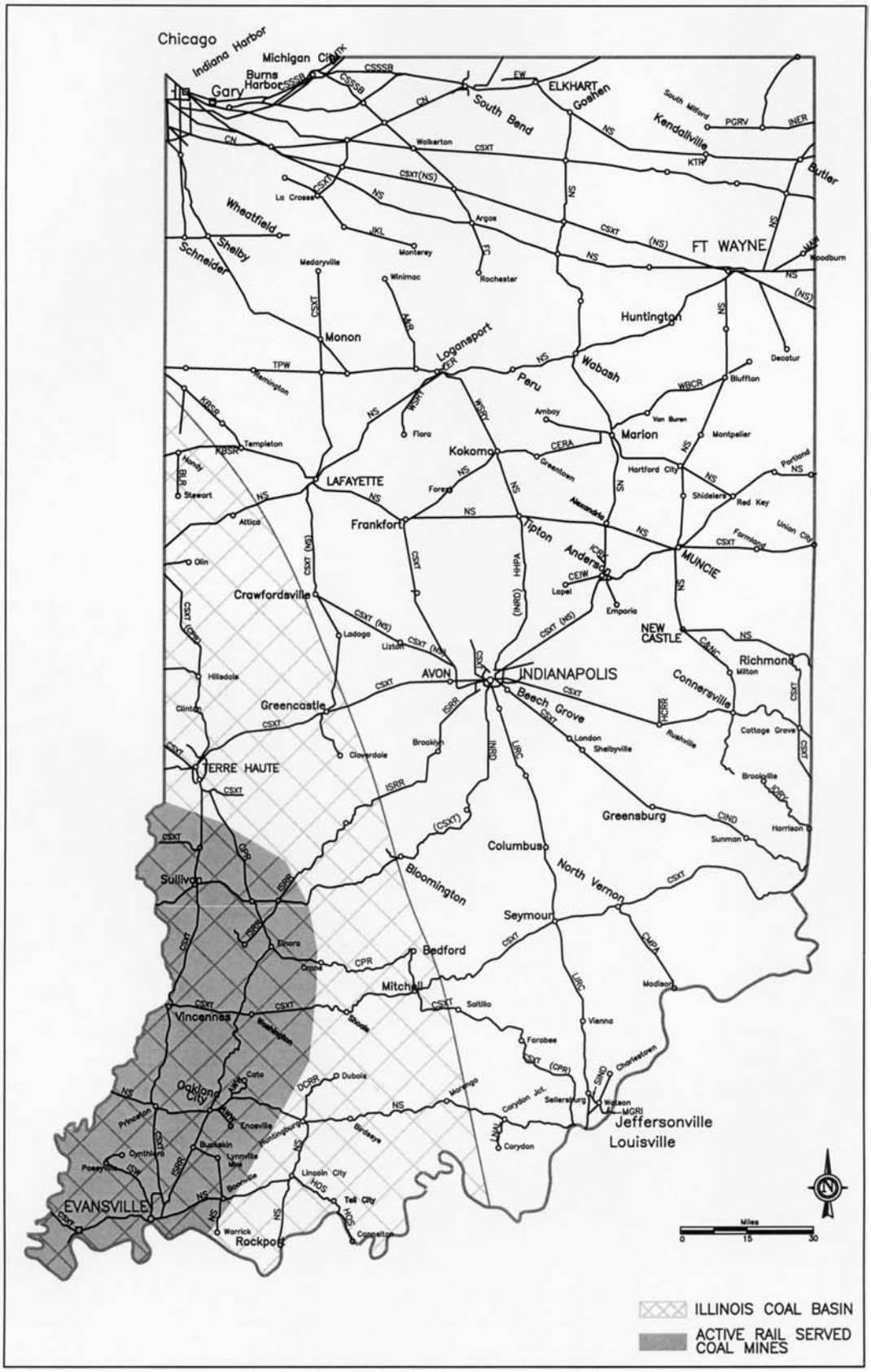
Coal, as noted, is a critical element in the rail traffic base in Indiana. According to the U.S. Department of Energy's Energy Information Administration, 36.8 million tons of coal originated in Indiana in 1998, primarily from surface-mines. Two-thirds of this tonnage originated by rail, 90 percent of which terminated in Indiana, almost exclusively at electric utilities. Thus, 60 percent of all coal production in Indiana, for use by Indiana utilities, is moved by rail.

Coal production in Indiana has increased at an average annual rate of 4.4 percent in the period 1994-1998, while production in the adjacent states of Illinois and Kentucky has declined 6.9 and 1.8 percent, respectively. No Indiana coal was exported in 1998, and negligible amounts were exported in prior years. Figure 2-2 presents Indiana's segment of the Illinois Basin, as well as that portion of the Illinois Basin in Indiana with active rail-served mining operations.

Coal produced in Indiana meets about 56 percent of the demand for coal in the state. Other major sources for Indiana are mines in Wyoming's Powder River Basin, West Virginia, Illinois, Kentucky and Virginia, in order of magnitude, totaling about 32.4 million tons. About 60 percent of out-of-state coal (19 million tons) is delivered by rail in Indiana. Less than half of the 17.3 million tons of Wyoming coal arrives in Indiana by rail. The balance of Wyoming coal is transloaded for river delivery in Indiana.

Approximately 85 percent of coal consumption in Indiana is by electric utilities. Indiana, along with Texas and Ohio, is one of only three states with coal-fired electric utility capacity exceeding 15,000 megawatts. The largest coal consumers (those that consume more than 4 million tons) in Indiana by rank are PSI Energy, Inc., Indiana Michigan Power Company, Northern Indiana Public Service Company, and Indiana-Kentucky Electric Corporation. In Indiana, there are 28 coal-burning utility plants, not all of which are served by rail. About 62 percent of electric utility coal is delivered by rail, 21 percent by river, 15 percent by truck, and 2 percent by conveyor.

Figure 2-2 Coal Mining and Rail Service



Other major coal consumers in Indiana are steel, aluminum, cement and food producers.

In 1999, rail originations of coal in Indiana totaled 241,955 carloads, with mines located on the Soo Line/Canadian Pacific Railway line segment between Fayette and Bedford accounting for 52 percent of the total. Rail terminations of coal in Indiana totaled 385,558 carloads, with Norfolk Southern terminating the largest volume. The market shares in Indiana for individual railroads are indicated in Table 2-6.

Table 2-6 Coal Originations and Terminations in Indiana by Rail Carrier

Year 1999

Railroad	Carloads Originating		Carloads Terminating	
	Number	Percent	Number	Percent
Soo Line/Canadian Pacific	124,370	52	68,239	18
Norfolk Southern	64,832	27	129,360	34
CSXT	30,100	12	59,899	15
Indiana Rail Road	16,468	7	26,600	7
Elgin, Joliet & Eastern	- 0 -	- 0 -	65,600	17
Chicago, SouthShore & S.B.	- 0 -	- 0 -	35,590	9
Others	6,185	2	- 0 -	- 0 -
Total	241,955	100	385,558	100

Source: U.S. STB Rail Waybill Sample

About 44 percent of coal terminating in Indiana originated in other states, Wyoming being the largest out-of-state source. Coal represents nearly 80 percent of all Indiana intrastate rail traffic, based on the Rail Waybill Sample data. Recently, Indiana Southern Railroad (ISRR) commenced coal movements under a new transportation agreement with Black Beauty Coal Company that will divert at least 8,000 carloads per year from truck to rail for a period of at least five years. Other principal intrastate rail traffic included metals and metal products, scrap material, automotive parts, and coke.

2.1.1.2 Grain

Rail is an integral component in Indiana's $5 billion agribusiness industry. After coal, the second largest rail commodity group originating in Indiana is farm products. In 1999, nearly 100,000 carloads of grain products originated in Indiana. In 2001, Indiana produced nearly 1.2 billion bushels of agricultural products including corn, soybeans, winter wheat and oats. Corn is the largest single agricultural commodity, with 885 million bushels produced in 2002, a 9 percent increase over the 2000 level. In the same year, the 10 highest corn-growing counties produced 190 million bushels. Figure 2-3 presents Indiana's rail network in relation to:

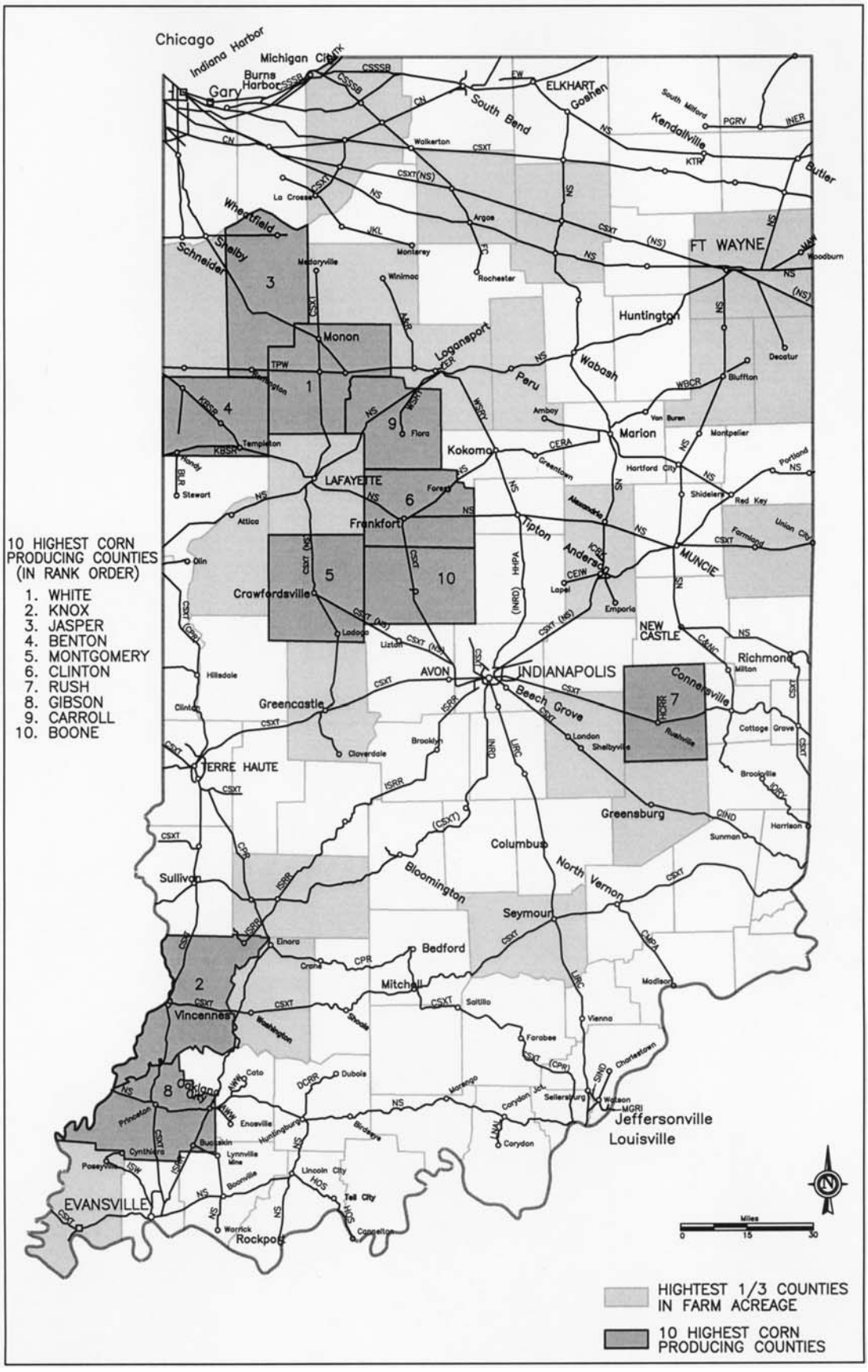
- the highest one-third of the counties in acreage devoted to farms, and
- the ten highest corn-producing counties.

It should be noted that the 10 highest corn-producing counties are included in the group with the highest farm acreage.

The principal destination states for agricultural products were Georgia (29,568 carloads), North Carolina (22,887), Alabama (10,882), Tennessee (10,024), and Illinois (7,050). Nearly 5,000 carloads of grain products were shipped intrastate. Norfolk Southern originated 5.3 million tons of grain at 65 stations. CSXT originated 3.7 million tons at 43 stations.

A significant portion of grain originations by rail in Indiana are by short lines. Many short line railroads predominantly serve rural areas, and 15 counties are served exclusively by short lines. Approximately half of short lines are heavily dependent on grain loadings for their annual operating revenues. These "grain" short lines, representing about 600 route miles in Indiana, are an important element in the grain marketing system by functioning as a gathering network for the Class I line haul railroads. Short lines also reduce the need for trucking grain on the state's aging county road network to more distant rail loading points. Efficient, low-cost transportation is an essential ingredient in the highly competitive grain market where unit margins are very small.

Figure 2-3 Grain Production and Rail Service



2.1.2 Regional and Short Line Railroads

Utilizing the U.S. Surface Transportation Board's classification system for designating Class II and Class III freight railroads, there are 37 common carrier railroad companies operating in Indiana, in addition to the four Class I railroads. Class III railroads are those with revenues less than $20.7 million. Class II railroads are those with revenues less than $258.5 million, but more than the $20.7 million standard for Class III railroads. Only two of the 37 railroads are in the Class II category, the Indiana Harbor Belt Railroad (IHB) and the Elgin, Joliet & Eastern Railway (EJE). Together, these two railroads operate only 64 route miles in Indiana, equating to five percent of the state's non-Class I route mileage of 1,229 miles. However, these two railroad companies with 5 percent of mileage account for nearly 65 percent of carloads handled by the Class II and Class III railroads.

Three Indiana railroads in the Class III category individually operate over 100 route miles. These three railroads are the Indiana Southern (175 miles), The Indiana Rail Road (155 miles), and the Louisville & Indiana (110 miles). Table 2-7 presents selected Class II and III railroad data. More detailed data is available in Appendices B, C and D.

Table 2-7 Indiana Regional and Short Line Railroads

Railroad	Route Miles	Carloads Handled Number	percent Total	Carloads Per Mile	Principal Commodities
Indiana Harbor Belt	26.5	443,344	52.0	16,730	Steel, coal, food products
Elgin, Joliet & Eastern	37.0	142,921	17.0	3,863	Steel, coal
The Indiana Rail Road	155.0	68,416	8.0	441	Coal, petroleum
Chi, SouthShore & S.B.	52.0	58,597	7.0	1,127	Coal, Steel
Indiana Southern	175.0	44,948	5.0	257	Coal, grain, chemicals
Algers, Winslow & West.	24.4	21,260	2.5	871	Coal, railroad ties
Louisville & Indiana	110.0	14,575	1.7	133	Fertilizer, grain, cement
Toledo, Peoria & Western	55.0	9,328	1.1	170	Grain, aggregates, fertilizer
Central RR of Indianapolis	45.0	7,901	0.9	176	Grain, non-met minerals
All others – 28 railroads	589.0	43,215	5.0	73	Grain, non-met minerals
Total	1,268.9	854,505	100.2		

Source: Annual Reports to INDOT

The railroad companies listed in Table 2-7, constitute 55 percent of total regional and short line route miles and handle 95 percent of total carloads handled by Class II and Class III railroads. Conversely, 45 percent of short line route miles handle 5 percent of total regional and short line carloads.

2.1.2.1 Rail Market Share

According to the U.S. DOT's Bureau of Transportation Statistics, in 1997 Indiana originated, by all transportation modes, 338.3 million tons of commodities and terminated 375.5 million tons. Of the originating tonnage, 65 percent also terminated in Indiana. Ten states originated more tonnage than Indiana. The top three were Texas, California, and Illinois.

The majority of tonnage originating in Indiana was destined to the four states bordering Indiana: Illinois, Ohio, Kentucky, and Michigan (listed by order of tonnage received). Two-thirds of interstate tonnage terminating in Indiana originated, by order of volume, in Illinois, Michigan, Ohio, and Louisiana.

In 1997, the rail mode represented 17.6 percent of tonnage originating in Indiana, an increase of 2.4 percentage points over the previous commodity flow census in 1993. In terms of dollar value of the commodities originating in Indiana, rail represented 5.6 percent of total value, reflecting the low value of bulk commodities handled by rail.

Table 2-8 indicates the market share, by mode, for traffic originating in Indiana for the years 1993 and 1997.

Table 2-8 Surface Transportation Mode Market Share for Traffic Originating in Indiana

(Years 1997 and 1993)

Transportation Mode	Tons (percent)	
	1993	1997
Truck	74.1	74.4
Railroad	15.2	17.6
Water	4.3	2.4
Pipeline	2.8	1.4
Rail/Truck Intermodal	0.2	--[a]
Other and unknown	3.4	4.2
Total	100.0	100.0

Source: Commodity Flow Survey, 1997 Economic Census, Dec. 9, 1999.
[a] Data do not meet U.S. DOT publication standards because of high sampling variability.

On the basis of ton-miles, the rail market share was 33 percent in 1997 as a result of the relatively high length of haul for rail traffic, and despite the short-haul characteristic of much of the coal traffic originated by rail in Indiana.

2.2 Railroad Profiles

2.2.1 Class I Railroads

CSX Transportation, Inc.
500 Water Street
Jacksonville, FL 32202
(904) 359-3100

CSX Transportation, Inc. (CSXT) operates 23,000 route miles, of which 1,935 route miles (8.4 percent) are in Indiana. CSXT serves most major population centers east of the Mississippi River, including 70 ocean, river, and lake ports, more than any other North American railroad. The CSXT network serves 45 automobile distribution centers; 44 intermodal container/trailer facilities, including two in Indiana, at Indianapolis and Evansville; and 102 bulk transfer sites, including six in Indiana at East Chicago, Evansville, Indianapolis, Jeffersonville, Lafayette, and Terre Haute. Figure 2-4 presents the CSXT railroad network in Indiana.

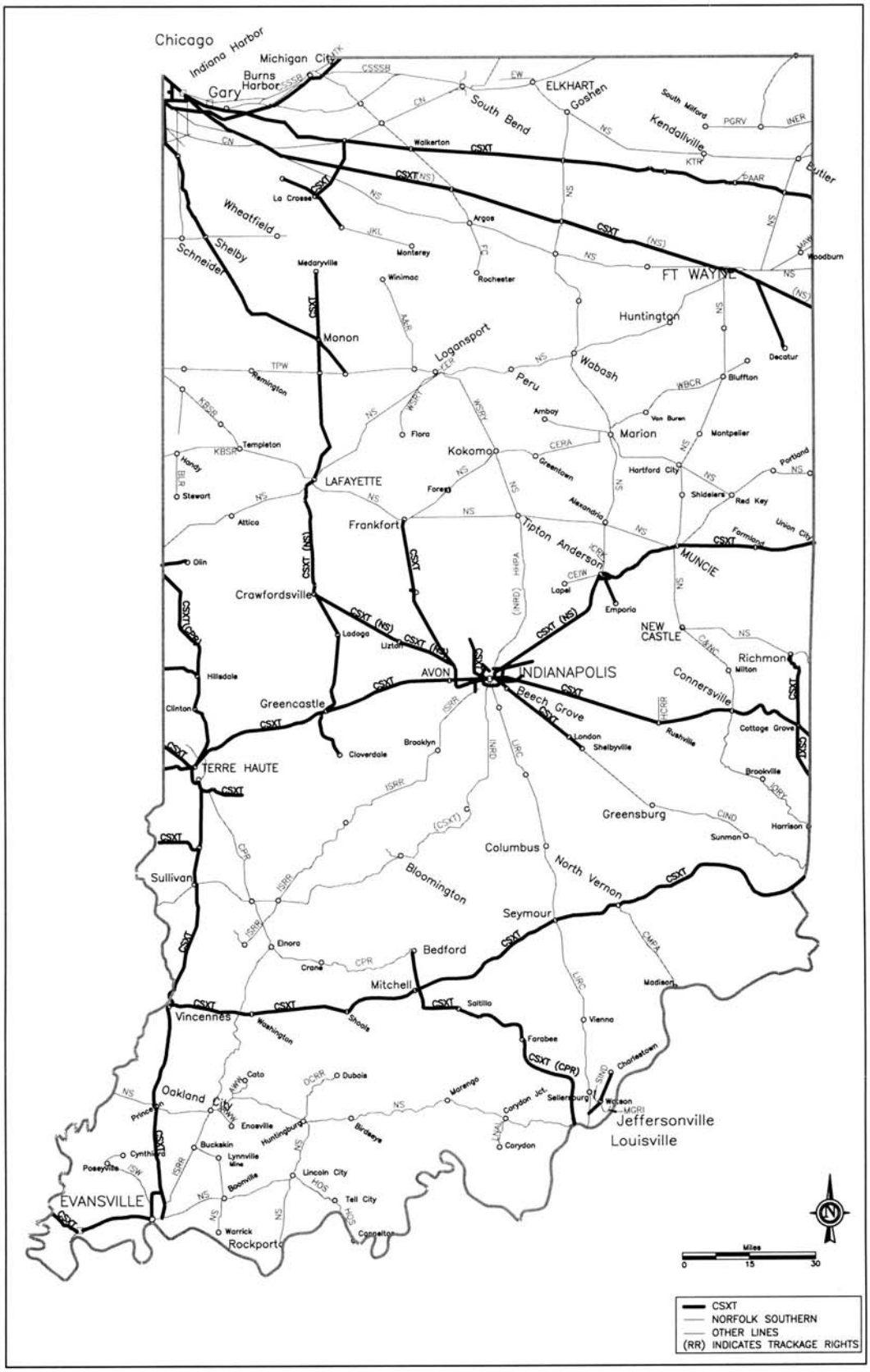
Organizationally, CSXT service in Indiana is operated by its Chicago, Nashville, Louisville, and Great Lakes divisions. The Nashville Division, headquartered in Nashville, TN, maintains operating offices in Evansville, Terre Haute, and Vincennes. The Great Lakes Division's Indianapolis Line has operating offices at Anderson, Avon (Big Four) and Hawthorne yards in Indianapolis. The Great Lakes Division is headquartered at Strongsville, OH, near Cleveland. The Chicago Division includes lines between Chicago and Garrett, Fort Wayne, and Lafayette, IN. The Louisville Division includes the Cincinnati to Indianapolis and St. Louis, as well as the Louisville line. There are 2,035 CSXT employees who are residents of Indiana.

In the year 2000, the first full year of integrated Conrail operations, CSXT's systemwide revenues were $6.1 billion, generated by the transport of 5.3 million carloads. This revenue was composed of 58 percent merchandise; 27 percent coal, coke, and ore; 14 percent automotive; and 1 percent miscellaneous revenues. In Indiana, CSXT has an approximately 25 percent market share of rail traffic originated and terminated.

CSXT connects with 21 of 37 Class II and III railroads in Indiana which account for 98 percent of traffic handled by Class II and III railroads in Indiana.

Norfolk Southern Railway
Three Commercial Place
Norfolk, VA 23510
(757) 629-2600

Figure 2-4 CSXT in Indiana



Norfolk Southern Railway (NS) operates 21,800 route miles, of which 1,569 route miles (7.2 percent) are in Indiana. NS operates in 22 states and the Province of Ontario, Canada. It employs 2,318 people in Indiana.

NS owns Triple Crown Services (TCS), which offers door-to-door intermodal service, utilizing its 5,500 owned RoadRailer® domestic containers, in NS's major traffic corridors. Fort Wayne, IN, is the headquarters of TCS and the principal hub of this network, which operates dedicated RoadRailer® trains, purchasing most of its rail transportation service (locomotives and train crews) from NS. Figure 2-5 presents the NS railroad network in Indiana.

Systemwide, NS operates 38 automotive distribution facilities, including two in Indiana at Elkhart and Roanoke; 53 intermodal container/trailer facilities (excluding nine Triple Crown Services facilities); and 174 bulk transfer sites, including nine in Indiana at Delphi, Dunkirk, Goshen, Hammond, Indianapolis (INRD), Logansport, Poneto (Wells County), Waterloo, and Whiting.

Organizationally, NS service in Indiana is operated by three divisions. The Dearborn Division, headquartered in Dearborn, MI, provides service via the Elkhart classification yard. The Lake Division, headquartered in Fort Wayne, provides service via Fort Wayne. The Illinois Division, headquartered in Decatur, IL, provides services west of Peru and Frankfort, and in southern Indiana on the Louisville–St. Louis line segment.

In the year 2000, NS had systemwide railway operating revenues of $6.2 billion, generated by 6.8 million carloads and containers. This revenue was composed of 62 percent general merchandise, 23 percent coal, and 15 percent automotive traffic. NS has the largest share of the rail market in Indiana, originating 42 percent of carloads and terminating 36 percent.

NS connects with 28 of 37 Class II and III railroads in Indiana which account for 99 percent of traffic handled by these railroads in Indiana.

Soo Line/Canadian Pacific Railway
401 9th Avenue S.W.
Calgary, Alberta, Canada T2P 4Z4
(403) 319-7000

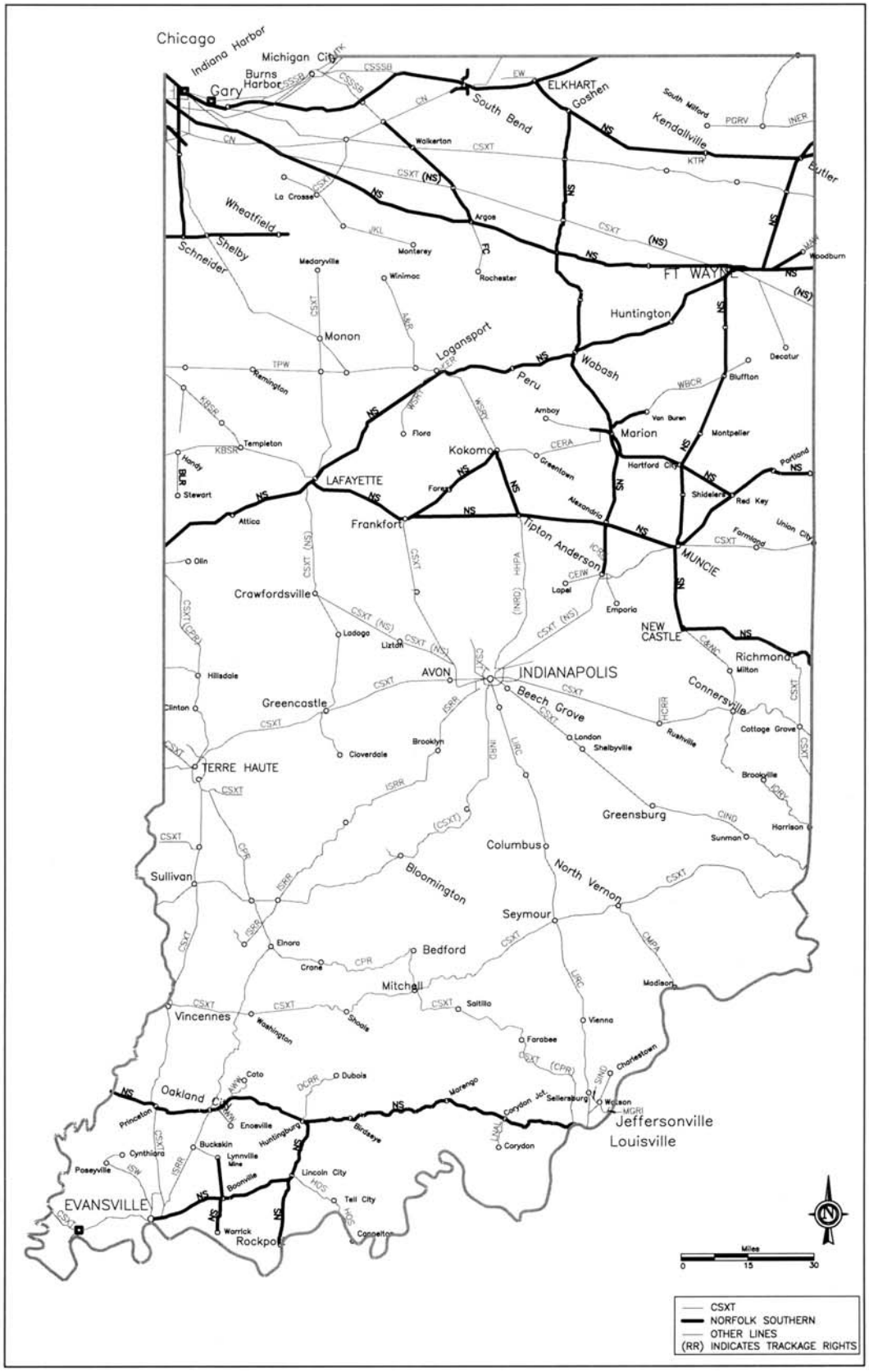
The Soo Line/Canadian Pacific Railway (CP) system operates 14,358 route miles in the United States and Canada, of which 3,261 route miles are Soo Line operations in the United States. Within Indiana, CP owns about 94 miles between Fayette and Bedford, utilizing trackage rights on CSXT in Indiana primarily to reach Chicago and Louisville. The railroad has approximately 100 employees working in Indiana. CP has a 49 percent ownership of the Indiana Harbor Belt Railroad. That 49 percent was formerly the equity portion of IHB owned by the Milwaukee Road and assumed by the Soo Line/CP in its 1985 acquisition of the Milwaukee Road. The Milwaukee Road had been in reorganization since 1977.

CP operations in Indiana are conducted by its Latta Subdivision, based at Spring Hill, IN. CP is the largest rail originator of coal in Indiana, with 52 percent of rail coal originations in 1999. For all rail tonnage in Indiana, CP had an originating market share of 17 percent and a terminating market share of 10 percent.

CP's systemwide traffic base is 22 percent domestic U.S. and 31 percent trans-border tonnage. Thus a significant percent of domestic U.S. tonnage is Indiana coal. However, this thermal coal is very short haul, from mine to utility, and yields relatively low revenue.

While Soo Line/CP has trackage rights to Louisville, KY, utilizing CSXT and NS (Kentucky and Indiana Terminal Bridge), CP traffic density is very light since its connections at Louisville, NS and CSXT, are able to require interchange at other points, such as Chicago, to maximize their revenue shares. CP has no intermodal or non-coal bulk transfer facilities in Indiana.

Figure 2-5 Norfolk Southern in Indiana



CP is unique among North American railroads in one aspect of intermodal trailer service. CP utilizes Expressway technology in its Montreal–Toronto–Detroit corridor. Expressway is a 3,700 foot intermodal shuttle train with 60-foot platforms. The system does not require trailer lifting equipment or reinforced trailers. This service is offered in partnership with trucking companies. CP has been experiencing considerable growth for this frequent, reserved space service. The technology could potentially have application in Indiana in a market such as Louisville/Nashville and Chicago. The CP route in Indiana, however, would require some infrastructure upgrading in order to be competitive.

Canadian National Railway
C. N. Headquarters Building
Montreal, QC H3C 3N4, Canada
(514) 399-5430

Canadian National is the larger of the two primary rail carriers in Canada. CN operates 18,382 route miles in North America, including the U.S. routes of the former Illinois Central, Wisconsin Central, and Grand Trunk Western. Grand Trunk Western is that unit of CN between Chicago and Detroit/Port Huron, MI, serving Indiana. While this line segment has approximately 32 trains per day on the 81-mile segment in northwest Indiana, virtually none of this traffic has a rail origin or termination in Indiana. This double track line is one of the highest density rail corridors in Indiana, providing a fast intermodal corridor between the Canadian ports of Halifax and Montreal, and the U.S. Midwest. Additionally, CP and CN have entered into an extensive Co-production Agreement throughout Canada and the U.S., including CN's Toronto/Chicago corridor, on which CP will route a limited number of merchandise and intermodal trains. CSXT Monon Subdivision trains, including Amtrak trains 50/850 and 51/851 (*Cardinal/Kentucky Cardinal*), utilize trackage rights on CN between Munster, IN interlocking and Thornton, Junction, IL. CN trains through Indiana are operated by its Midwest Division, headquartered in Chicago.

2.2.2 Class II Railroads

Elgin, Joliet & Eastern Railway Company
135 Jamison Lane
Monroeville, PA 15146
(412) 829-6746

The Elgin, Joliet, & Eastern Railway (EJ&E) operates approximately 166 route miles, about 20 percent of which is located in Indiana, including service to East Chicago, Hammond, Gary, Indiana Harbor, and Whiting. The EJ&E main line enters Indiana at Dyer. The EJ&E is a wholly owned subsidiary of U.S. Steel Corporation, which became a stand-alone company on January 1, 2002. U.S. Steel's Gary Works and East Chicago Tin Mill are major customers of the "J."

EJ&E interchanges in Indiana include CSXT at Curtis and East Chicago; SouthShore at Goff; Canadian National at Griffith: Indiana Harbor Belt at Hammond and Indiana Harbor; and Norfolk Southern at Pine and Van Loon. EJ&E is also known as "Chicago's Outer Belt," although it handles virtually no overhead or "bridge" traffic (which neither originates nor terminates on the "J"). The Belt Railway of Chicago and the Indiana Harbor Belt Railroad dominate this function, with classification yards and other facilities intended for this purpose.

In the year 2000, EJ&E handled 142,919 carloads, with the principal commodities being steel and coal. EJ&E does have a diverse manufacturing-oriented traffic base including petroleum, chemicals, plastics, cement, and packaging materials. U.S. Steel Corporation's Gary Works, served by EJ&E, is the largest of U.S. Steel's facilities, with four blast furnaces. The EJ&E does not operate any intermodal container service.

The EJ&E does not operate any running tracks in the FRA "excepted" track category. The line between Dyer and the lakefront is predominantly a 45 mph railroad (effectively FRA Class 3 track), with speed restrictions in the vicinity of the yard at Griffith. The lakefront route in Indiana is a 40 mph

line at Hammond, Whiting, Indiana Harbor, and Buffington, where the Northern Indiana Public Service Company's Dean Mitchell plant is located. The remaining running tracks are primarily FRA Class 1 (10 mph).

EJ&E's operations office is headquartered in Gary, at One North Buchanan Street.

Indiana Harbor Belt Railroad Company
2721 – 161st Street
Hammond, IN 46323
(219) 989-4724

The Indiana Harbor Belt Railroad Company (IHB) operates 54 miles of main track, of which 24 miles is double main track. Within Indiana are 26.5 route miles serving East Chicago, Hammond, Indiana Harbor, and Whiting, with trackage rights to Burns Harbor and Portage. The IHB is 51 percent jointly owned by CSXT and NS, formerly owned by Conrail, with the remaining 49 percent controlled by the Canadian Pacific Railway.

IHB interchanges with 16 trunk, regional, and local rail carriers in its service area of Illinois and Indiana. Bridge traffic accounts for nearly two-thirds of the annual traffic base of 450,000 carloads. For traffic, both bridge and on-line, the IHB's Blue Island Yard, a 44 classification track retarder hump yard, is the IHB's principal handling facility, although many trains operate as run-throughs on the IHB, such as between NS at Elkhart and UP at Proviso. Other major yards are Gibson Yard in Hammond, IN, which is currently dedicated to multi-level automobile traffic, and Michigan Avenue Yard in East Chicago, which provides support to the steel industry.

The IHB on-line traffic base is 35 percent primary metals, 16 percent coal and coke, and 10 percent food products, as well as scrap iron, grains, lumber, aggregates, and other commodities. Lake/barge transfer facilities are located in Portage, IN, with other bulk commodities transloading at East Chicago and Hammond.

IHB within Indiana currently operates 8.5 miles of FRA "excepted" running; 5.7 miles of FRA Class 1 track; and 12.4 miles of main track that are FRA Class 3 or higher.

2.2.3 Class III Railroads

The following Class III railroads are listed in order of volume of carloads handled, from highest to lowest.

The Indiana Rail Road Company
101 West Ohio Street, Suite 1600
Indianapolis, IN 46204
(317) 262-5140

The Indiana Rail Road Company (INRD) operates 155 route miles linking Indianapolis, Morgantown, Bloomington, Linton, Sullivan, and Newton, IL. In the year 2000, INRD handled 68,416 carloads of primarily coal and petroleum products, with approximately a 2 percent market share for Indiana rail traffic originated or terminated. INRD's market share for coal is about 7 percent for originations and terminations. Bridge traffic on the line is nearly non-existent. The INRD is maintained to the FRA Class 2 standard, which permits a maximum authorized speed of 25 mph for freight service.

INRD interchanges traffic with CSXT at Indianapolis, Bloomington, and Sullivan; with CN at Newton, IL; with Canadian Pacific at Linton; NS at Indianapolis, and Indiana Southern at Switz City. INRD does not operate intermodal container/trailer service.

The INRD has 80 employees.

Chicago SouthShore & South Bend Railroad Company
505 North Carroll Avenue
Michigan City, IN 46360
(219) 874-9000

The Chicago SouthShore & South Bend RR (CSS) provides freight service on 51.6 route miles in Lake, Porter, La Porte, and St. Joseph counties, serving Gary, Portage, Burns Harbor, New Carlisle, and South Bend via the NICTD line. CSS is a unit of Anacostia & Pacific Company, Inc., a rail holding company. In the year 2000, CSS handled a total of 58,597 carloads, primarily coal, steel, and steel products, with a 9 percent market share for coal terminated in Indiana. CSS did not handle any bridge traffic.

Interchange connections in Indiana include CSXT at Miller, EJ&E at Goff, CN and NS at South Bend, and CN at Stillwell (via a recently acquired line from Michigan City). CSS does not operate intermodal container/trailer service.

The mainline track structure of NICTD meets or exceeds FRA Class 4 standards, which permit freight train operation at up to 60 mph with automatic block signal system (ABS).

CSS has approximately 60 employees.

Indiana Southern Railroad, Inc.
P. O. Box 158
Petersburg, IN 47567
(812) 354-8080

The Indiana Southern Railroad (ISRR), a RailAmerica, Inc. property, operates a 170-mile rail line between Indianapolis and Evansville via Switz City, Petersburg, and Oakland City. ISRR interchanges with CSXT at Indianapolis and Evansville; with NS at Indianapolis and Oakland City Junction; with The Indiana Rail Road at Switz City; with Canadian Pacific Railway at Bee Hunter; and with the Algers, Winslow & Western Railway at Oakland City Jct. About 81 percent of the mainline meets or exceeds FRA Class 2 standards, with the balance at FRA Class 1 standard.

In the year 2000, ISRR handled 44,948 carloads of primarily coal, farm products, and chemicals. Bridge traffic is quite significant, accounting for 23 percent of carloads handled. Late in the year 2001, ISRR commenced coal movements under a new transportation agreement with Black Beauty Coal Company that will divert at least 8,000 carloads per year from truck to rail for a period of at least five years.

ISRR employs 27 individuals.

Algers, Winslow & Western Railway Company
P. O. Box 188
Oakland City, IN 47660
(812) 749-4053

Algers, Winslow & Western Railway (AWW) operates 16 route miles in Pike County. The line is equally owned by the Norfolk Southern Corporation and Kindill Mining Company. All trackage either meets or exceeds FRA Class 2 track standards.

In the year 2001, AWW handled 21,260 carloads, primarily coal. At Oakland City Junction, AWW interchanges with NS, Indiana Southern RR, and CSXT via trackage rights for coal movements on NS Kentucky Division between Princeton, IN (CSXT Chicago Service Lane, CE&D Subdivision) and Oakland City Junction, 14 miles.

AWW has nine employees assigned to the property, with certain overhead functions performed by NS.

Louisville & Indiana Railroad Company
500 Willinger Lane
Jeffersonville, IN 47130
(812) 288-0940

The Louisville & Indiana Railroad (LIRC) operates 106 owned route miles between Indianapolis and Louisville, KY. LIRC is a unit of Anacostia & Pacific Company, Inc., which also owns the Chicago SouthShore & South Bend. In the year 2000, LIRC handled 23,000 carloads on this route, 95 percent of which meets or exceeds FRA Class 2 track standards. The principal commodities handled include chemicals, grain, steel, lumber, auto parts, paper, and cement. Major shippers include Ford Motor Company, Colgate-Palmolive, Kokomo Grain, Consolidated Grain & Barge, and Stone Container Corporation.

LIRC interchanges with CSXT at Indianapolis (Avon Yard), Jeffersonville, Seymour, and Louisville, KY; with The Indiana Rail Road and the Indiana Southern Railroad at Indianapolis; MG Rail (a Division of Consolidated Grain & Barge Co.) at Clark Maritime Center, and with the Canadian Pacific, NS, and Paducah & Louisville at Louisville, KY.

Bulk transload facilities are located at Jeffersonville, as well as port facilities at the Clark Maritime Centre and Jeffersonville.

Amtrak's daily Chicago–Louisville *Kentucky Cardinal* utilizes the LIRC between Indianapolis and Jeffersonville. In October 2000, the U.S. Department of Transportation designated the LIRC alignment as a high-speed rail corridor. Between Indianapolis and Edinburg, IN, the LIRC is designated by the Department of Defense as an element of the Strategic Rail Corridor Network (STRACNET).

LIRC employs 42 individuals.

Toledo, Peoria & Western Railway Corporation
1990 East Washington Street
East Peoria, IL 61611
(309) 698-2600

The Toledo, Peoria & Western (TPW) operates 61.3 route miles in Indiana. The TPW is a unit of RailAmerica, Inc., as is the Central Railroad of Indianapolis (CERA), with which it connects at Logansport and Kokomo via trackage rights. In the year 2000, TPW originated or terminated in Indiana 8,711 carloads and intermodal units. Intermodal units at Hoosier Lift, in Remington, totaled 5,715. TPW traffic in Indiana totaled about 13 percent of all TPW carloads. Traffic in Indiana, besides intermodal containers and trailers, consisted primarily of grain, aggregates, and fertilizers.

Operations in Indiana are based at Remington. Intermodal volumes at Hoosier Lift are not sufficient to justify a dedicated intermodal train. From Remington some intermodal traffic consisting of auto parts is drayed to Subaru-Isuzu at Lafayette.

TPW interchanges with CSXT's Monon Subdivision at Reynolds and with NS at Logansport and Marion via trackage rights. Other interchanges in Indiana are with the Logansport and Eel River, Winamac Southern Railway and the A&R Line.

TPW has 80 employees, four of whom are based in Indiana, reflecting the relatively light density of traffic on the east end of the line.

MG Rail, Incorporated
5130 Port Road
Jeffersonville, IN 47130
(812) 283-9500

MG Rail (MGRI) is a switching railroad operated by Consolidated Grain & Barge Company, at Jeffersonville, on track owned by the Clark Maritime Center of the Indiana Port Commission. MGRI operates on 8.5 miles of track that meet or exceed FRA Class 1 track standards. In the year 2000, MGRI handled 9,300 carloads, primarily grain, steel, fertilizer, and plastics. MGRI interchanges with CSXT Louisville Terminal Subdivision and the Louisville & Indiana Railroad.

Central Railroad Company of Indianapolis
497 Circle Freeway Drive, Suite 230
Cincinnati, OH 45246
(765) 454-7903

The Central Railroad of Indianapolis (CERA), a unit of RailAmerica, Inc., operates 45 route miles in Miami, Grant, and Howard counties, including Kokomo. In the year 2000, the CERA handled 7,901 carloads of primarily farm products, non-metallic minerals, and chemicals. About 95 percent of the line meets or exceeds FRA Class 2 track standards, with the remaining being FRA "excepted" track.

CERA interchanges with NS at Kokomo and Marion (via trackage rights), as well as the Winimac Southern Railway at Kokomo.

CERA has seven employees.

Kankakee, Beaverville, and Southern Railroad Company
P. O. Box 136
Beaverville, IL 60912
(815) 486-7260

The Kankakee, Beaverville, and Southern Railroad (KBSR) operates 75 route miles in Indiana, westward from Lafayette to Templeton, IN, with diverging line segments through northern and southern Benton County to Sheldon, IL and Cheneyville, IL. Total route miles for KBSR is 154, including lines in Illinois, reaching Kankakee and the Danville area. Over 75 percent of the Indiana route meets or exceeds FRA Class 2 track standards. The balance is FRA Class 1. In the year 2000, KBSR handled 7,147 carloads, primarily corn, fertilizer and bird seed. About 85 percent of traffic originates on the KBSR. No trailer/container intermodal service is operated by the KBSR.

Interchanges within Indiana are at Lafayette with NS (Illinois Division) and CSXT (Monon Subdivision), as well as at Handy, IN, with the BeeLine Railroad for which KBSR is the contracted operator of this former Conrail property. Interchange carriers within Illinois include the TPW, Union Pacific, Canadian National, NS, and CSXT.

KBSR has 14 employees.

Louisville, New Albany, and Corydon Railroad Company
210 West Walnut Street
P. O. Box 10
Corydon, IN 47112
(812) 738-3171

The Louisville, New Albany, and Corydon Railroad (LNAL) operates 7.7 route miles in Harrison County, IN, all track being in the FRA Class 1 category. In the year 2000, LNAL handled 3,395 carloads, primarily consisting of automotive parts, silica, plastics, logs, chemicals, popping corn, and fertilizers. The LNAL interchanges exclusively with NS at Corydon Junction, IN.

LNAL also operates an historic excursion train from Corydon, the original state capital of Indiana.

LNAL has seven employees.

Maumee & Western Railroad Company
817 5th Street
Defiance, OH 43512
(419) 784-0889

The Maumee & Western Railroad (MAW) operates 51 route miles between Woodburn, IN, and Liberty Center, OH via Defiance, OH. MAW operates 3.1 miles within Indiana, all of which is FRA Class 1 track. In the year 2000, MAW handled a total of 3,300 carloads, including traffic at stations in Ohio. Principal commodities handled included grain, plastics, and minerals. Within Indiana, Allen County Cooperative is at Woodburn.

MAW interchanges with NS at Woodburn and CSXT at Defiance, OH.

MAW has five employees.

Indiana Northeastern Railroad Company
P.O. Box 262
50 Monroe Street
Hillsdale, MI 49242
(517) 439-4677

Indiana Northeastern Railroad (INER) operates 43 route miles in Indiana in LaGrange and Steuben counties, including South Milford (via PGRV), Steubenville, and Angola. About one-fourth of the route miles are in the FRA "excepted" category, with the balance being FRA Class 1. In the year 2000, Indiana Northeastern handled 3,116 carloads, primarily grain, steel rods, flour, and dextrose. Traffic in Indiana includes 50-car unit grain trains originated in South Milford on the PGRV and LaClede Steel at Fremont.

INER interchanges with NS's Detroit District at Montpelier, OH.

INER has 8 employees.

Southern Indiana Railway, Inc.
P.O. Box 132
Sellersburg, IN 47172
(812) 246-2138

Southern Indiana Railway (SIND) operates 5.5 route miles in Clark County, between Watson, Sellersburg, and Speed. In the year 2000, SIND handled 3,107 carloads. The line meets or exceeds FRA Class 2 track standards.

SIND interchanges with CSXT, its only direct interchange, at Watson on CSXT Louisville Terminal Subdivision. SIND has five employees.

C & NC Railroad Corporation
4301 North Western Avenue
Connersville, IN 47331
(765) 825-0349

C&NC Railroad (CNUR) operates 27.3 route miles between Connersville and New Castle, in Fayette and Henry counties. In the year 2000, CNUR handled 2,400 carloads, primarily auto parts and fertilizer. The line is classified as FRA Class 1 track.

CNUR interchanges with CSXT Louisville Service Lane at Connersville and CSXT Indianapolis Service Lane at New Castle via trackage rights on NS Lake Division. CNUR also interchanges with NS at New Castle. CNUR has six employees.

Hoosier Southern Railroad
P.O. Box 423
Tell City, IN 47586
(812) 547-3586

Hoosier Southern Railroad (HOS), an entity of the Perry County Port Authority, operates 22 route miles between Lincoln City and Cannelton, in Spencer and Perry counties, including the Tell City Port on the Ohio River. Industries include Waupaca Foundry (auto castings), American Colloid (specialty minerals), Kimball International (lumber), and Consolidated Recycling. In the year 2000, HOS handled 2,367 carloads, primarily pig iron, sand, and clay. About 83 percent of the line is FRA Class 1 track, the balance is FRA "excepted" track. The line to Tell City returned to service in 1995, after four years in out-of-service status. The line between Tell City and Cannelton remains out-of-service.

HOS interchanges with NS Evansville Branch of the Illinois Division at Lincoln City. The HOS has seven employees.

Wabash Central Railroad Corporation
804 Bond Street
Bluffton, IN 46714
(219) 824-8818

The Wabash Central Railroad (WBCR) operates 26.4 route miles between Craigville, Bluffton, and Van Buren, in Wells, Huntington, and Grant counties. The line has 14 miles of FRA Class 1 track; the balance is FRA "excepted" track. In the year 2000, WBCR handled 2,078 carloads, primarily grain, food products, and plastics. The principal shipper is Weaver Popcorn in Van Buren. Most traffic is located west of Bluffton, where traffic is interchanged with NS New Castle District of the Lake Division. WBCR has three employees.

Central Indiana & Western Railroad Company
P. O. Box 456
Lapel, IN 46051
(765) 534-3398

Central Indiana and Western Railroad Company (CEIW) operates 9 route miles in Madison County, between Lapel and CSXT's South Anderson Yard, an interchange point with the Indianapolis Line. Seven miles of the line is FRA Class 1; the balance is FRA "excepted" track. In the year 2000, CEIW handled 1,961 carloads of silica sand, soda ash, and grain. Most traffic moves over the entire nine miles of CEIW. There are glass making facilities and grain elevators, which are the major shippers, centered in Lapel at the west end of the line. CEIW has two employees.

Central Railroad Company of Indiana
497 Circle Freeway Drive
Cincinnati, OH 45246
(513) 353-3614

The Central Railroad Company of Indiana (CIND), a unit of RailAmerica, Inc., owns 60.5 route miles of rail in Indiana between Shelbyville and Valley Junction, OH. CIND reaches Cincinnati, OH, via a combination of line ownership and trackage rights. At Cincinnati, CIND interchanges with CSXT, NS, CN, and the Indiana & Ohio Railway (IORY). CIND has trackage rights between Shelbyville and Indianapolis for interchange with CSXT.

CIND, a former segment of the Big Four Route of New York Central System between Chicago and Cincinnati, is capable of handling cars of 286,000 lbs. GWR, with no trackage in the FRA "excepted track" category. The principal commodities handled include farm products, chemicals, and non-metallic minerals.

Indian Creek Railroad Company
7878 West 600 North
Frankton, IN 46044
(765) 754-7541

Indian Creek Railroad (ICRK) operates 4.5 route miles in Madison County, between Frankton and Anderson, the interchange point with the NS Marion Branch of the Dearborn Division. The line in its entirety is FRA "excepted" track. In the year 2000, ICRK handled 1,715 carloads of corn, soybeans and wheat. Train operations take place primarily during fall and early winter.

Winamac Southern Railway Company
P. O. Box 55
Kokomo, IN 46903
(765) 457-7536

Winamac Southern Railway (WSRY) operates 46 route miles in two line segments, between Kokomo and Logansport, and between Clymers and Bringhurst, in Howard, Cass, and Carroll counties. These former Conrail line segments are connected by trackage rights on the NS Lafayette District. In the year 2000, WSRY handled 1,499 carloads, primarily grain, scrap, and fertilizer. The majority of traffic is currently concentrated in the Logansport area. At Logansport, WSRY interchanges with NS and TPW. In the year 2000, about twenty percent of WSRY traffic was overhead between CERA and TPW, which are RailAmerica properties.

Nearly all route miles presently equal or exceed FRA Class 1 track standards. WSRY operations are performed under contract with RailAmerica, Inc.

A&R Line, Incorporated
123 Depot Street
Wawaka, IN 46794
(219) 761-3311

A&R Line (ARE) operates 26.1 route miles between Winamac and Kenneth, in Pulaski and Cass counties. In the year 2000, ARE handled 1,292 carloads, primarily grain, grain products, fertilizers, and railroad equipment. The line is owned by Cargill, Inc., with operations performed under contract with its interchange carrier, TPW, at Logansport. Traylor Chemical, at Royal Center, is also a customer. Nearly all route miles currently equal or exceed FRA Class 2 track standards.

Fulton County Railroad Company
P. O. Box 545
Rochester, IN 46975
(219) 223-3175

Fulton County Railroad (FC) operates 12 route miles between Rochester and Argos, the interchange with NS Chicago District of the Lake Division. Ten miles is FRA Class 1 track, the balance is FRA "excepted" track. In the year 2000, FC handled 1,100 carloads of corn, soybeans, fertilizer, and cornmeal.

Indiana Southwestern Railway Company
1318 South Johanson Road
Peoria, IL 61607
(309) 697-1400

Indiana Southwestern Railway (ISW) operates 23 route miles in Vanderburgh and Posey counties. The line in its entirety is FRA "excepted" track. In the year 2000, ISW handled 1,000 carloads, primarily corn, beans, plastic, and equipment. ISW interchanges with the CSXT Evansville Terminal Subdivision at Harwood, the center of ISW operations. ISW is a property of Pioneer Rail Corporation, along with the Elkhart & Western Railroad. ISW has two full-time employees and one part-time.

Pigeon River Railroad Company
P. O. Box 123
South Milford, IN 46786
(219) 351-2421

Pigeon River Railroad (PGRV) operates 9.4 route miles in LaGrange and Steuben counties, between South Milford and Ashley/Hudson, where the PGRV connects to the Indiana Northeastern Railroad. In the year 2000, PGRV originated 988 carloads of grain, including corn, soybeans, and wheat. The line is FRA "excepted" track.

Elkhart & Western Railroad Company
1318 South Johanson Road
Peoria, IL 61607
(309) 697-1400

The Elkhart & Western Railroad (EWRR), a Pioneer Railcorp property, operates 8.9 route miles between Elkhart and Mishawaka, in Elkhart and St. Joseph counties. In the year 2000, EWRR handled 700 carloads, primarily cement, lumber, and plywood. Shippers include Lonestar Cement, Huttig Building Products, and Midwest Distribution, Inc. EWRR interchanges with the NS Kalamazoo branch in Elkhart. Through a haulage agreement to Fort Wayne with NS, EWRR connects with CSXT and can quote through rates with CSXT. The line is FRA "excepted" track. The EWRR has two employees.

Madison Railroad
P. O. Box 1102
Madison, IN 47250
(812) 273-4248

The Madison Railroad (CMPA), a division of the City of Madison Port Authority, operates 25.8 route miles in Jennings and Jefferson counties. In the year 2000, CMPA handled 680 carloads, primarily polyethylene, scrap steel, steel coils, and bottom ash. As part of its plan to increase rail traffic on its line, Madison Railroad purchased 17 miles of industrial and storage tracks inside the former military installation at the Jefferson Proving Grounds in 1998. The line is FRA Class I and II, except for one mile of track which is currently out of service. CMPA's interchanges with CSXT at North Vernon, on the Louisville Service Lane, Indiana Subdivision.

CMPA has five employees.

Indiana & Ohio Railroad Company
497 Circle Freeway Drive, Suite 230
Cincinnati, OH 45246
(513) 860-1000

Indiana & Ohio Railroad (IORY), a RailAmerica, Inc. property, operates 20 route miles between Valley Junction, OH, and Brookville, IN, in primarily Franklin County, Indiana. At Valley Junction, OH, IORY connects with CIND, also a RailAmerica, Inc. property. Interchange is made with NS and CSXT in Cincinnati, 17 miles east of Valley Junction. The IORY is completely FRA Class 1 track.

In the year 2000, IORY handled 678 carloads.

Kendallville Terminal Railway Company
1318 South Johanson Road
Peoria, IL 61607
(309) 697-1400

Kendallville Terminal Railway (KTR), a unit of Pioneer Railcorp, operates 1.1 route miles in Kendallville in Noble County. The line is FRA "excepted" track acquired from Conrail in 1996. KTR's largest customer is Kraft Foods, Inc., interchanging with NS Dearborn Division's Chicago Line at Kendallville. In the year 2001, KTR handled 625 carloads. KTR has two employees.

Honey Creek Railroad, Incorporated
P. O. Box 646
Morristown, IN 46161
(765) 763-1215

The Honey Creek Railroad (HCRR) operates 6.5 route miles between Rushville and Sexton. The line is FRA Class 2 track which was acquired from Conrail in 1993. In the year 2000, HCRR handled 604 carloads, primarily shell corn and soybeans. Interchange is with CSXT at Rushville.

Until recently, HCRR also operated a 4-mile line in Henry County between New Castle and Sulphur Springs. HCRR is in the process of abandoning this line segment.

Dubois County Railroad Company
1 Monon Street
French Lick, IN 47432
(812) 936-2626

Dubois County Railroad (DCRR) operates 16 route miles in Dubois County, linking Dubois, Jasper and Huntingburg, which is the DCRR interchange with the NS Kentucky Division's St. Louis District. The line is FRA Class 1 track. In the year 2000, DCRR handled 552 carloads, primarily soybean meal, lumber, and oil. The DCRR, which has seven employees, is owned by the Indiana Railroad Museum at French Lick.

J. K. Line, Incorporated
P.O. Box 5724
Minneapolis, MN 55440
(952) 742-4542

J. K. Line is owned by Cargill, Inc. and operated under contract by the Toledo, Peoria & Western, a RailAmerica, Inc. property. J.K. Line consists of 16 route miles between North Judson and Monterey, primarily in Starke County. The line meets or exceeds FRA Class 2 track standards.

The J.K. Line interchanges with CSXT Chicago Service Lane, Wabash Subdivision at North Judson. In the year 2000, J. K. Line handled 458 carloads, primarily grain and grain products.

BeeLine Railroad, Incorporated
8217W, 300 North Street
Williamsport, IN 47993
(765) 986-2254

BeeLine operates 10.8 route miles between Handy and Stewart, in Benton and Warren counties. The line is owned by an online grain shipper and operated by Kankakee, Beaverville & Southern Railroad with which the BeeLine interchanges at Handy. In the year 2000, BeeLine handled 345 carloads of corn and fertilizer. The line is FRA Class 1 track, except for 1.2 miles of "excepted" track.

Hoosier Heritage Port Authority
33 North 9th Street, Suite 215
Noblesville, IN 46060
(317) 776-8268

The Hoosier Heritage Port Authority (HHPA) owns 41 route miles between Tipton and Indianapolis – Jefferson Street that is operated by the Indiana Transportation Museum as a common carrier. HHPA has 31 route miles that meet or exceed FRA Class 1 track standards. The balance of track is in the FRA "excepted" category.

In the year 2000, HHPA handled about 250 carloads, primarily coal. HHPA interchanges with CSXT and the Indiana Rail Road in Indianapolis. Freight service on this line is operated, under contract, by the Indiana Rail Road, with the Transportation Museum operating excursion trains, including the annual State Fair train.

Port Authority of Auburn, Indiana
P. O. Box 506
Auburn, IN 46706
(219) 925-6450

The Port Authority of Auburn (PAAI) owns 2.4 miles at Auburn, IN. CSXT, the interchange carrier, provides service on the line, which meets or exceeds FRA Class 1 track standards. In the year 2000, PAAI handled 37 carloads.

Logansport & Eel River Short Line, Incorporated
P. O. Box 1005
Logansport, IN 46947
(219) 739-0314

The Logansport & Eel River (LER) operates 1.1 route miles northeast from Peoria Junction in Logansport. LER interchanges with TPW and NS (via the Winamac Southern). No traffic was handled in the year 2000. In previous years the principal commodity handled was lumber.

2.3 Heavy Axle Loads

A long-term trend by shippers and rail carriers toward increasing the productivity of railroad freight cars has resulted in the majority of rail tonnage moving in carloads ranging between 100 and 110 net tons per car. This is particularly the case for coal and grain, which together accounted for 52 percent of all rail tonnage in the U.S. in the year 2000. A rail car loaded with the 110 tons of either coal or grain, for example, has a gross weight on rail (GWR) of approximately 286,000 lbs. and is considered a heavy axle load. This GWR is becoming virtually an operating necessity for nearly all of the general railroad network, including branch lines and short line railroads.

Particularly anomalous in Indiana is the Canadian Pacific Railway's Latta Subdivision, which originates more than one-half of Indiana-mined coal that is moved by rail. The Latta Subdivision cannot accommodate 286,000 lbs. GWR. Three major steel structures require replacement, as well as several smaller structures to accommodate the heavier loads. The estimated replacement cost is $13 million.

This update of the Indiana State Rail Plan includes a survey of the capacity and plans of Indiana short lines to accommodate 286,000 lbs. GWR. The Indiana DOT's Multi-Modal Division and its Rail Section has been making steady progress in improving the infrastructure condition of short lines, including bridge strengthening and track upgrading that will permit operation of heavy axle loads as a matter of normal course. Some short lines are already capable of handling 286,000 lbs. GWR. Other short lines have estimated the capital program necessary to be capable, while still others have not completed their capital program estimates.

Twelve short lines with route miles totaling about 320 miles are capable of handling cars of 286,000 lbs. GWR. About six percent of these route miles are classified by Federal Railroad Administration track standards as "excepted" track. This means that train operation above ten miles per hour is prohibited, along with other restrictions, including the movement of hazardous materials.

In the category of short lines requiring upgrading to handle 286,000 lbs. GWR, 23 short lines operating about 885 route miles require varying levels of capital program work at certain locations. These railroads have about 86 miles categorized by the FRA as "excepted," accounting for about nine percent of the routes operated by these short lines.

2.3.1 Methodology for Determining 286,000 lbs. GWR Upgrade Costs for Short Lines

Fourteen short line railroads have indicated the need for 286,000 lbs. GWR capability, but have not estimated track and structures upgrading costs. In order to evaluate the statewide short line needs, an estimating methodology was developed and applied to those short lines having no upgrade cost estimates.

It is important to note that the methodology used herein is very generalized and is intended to present to INDOT a basis for a comparison of up-grade costs among Indiana short line railroads. The methodology uses consistently applied criteria to develop order-of-magnitude costs. It is also important to note that no site visits to the properties were made. Therefore, significant deviations from the assumptions used in the condition assessments are possible. Decisions regarding the actual expenditure or prioritizing of funds should be made in light of further verification of the initial assumptions.

2.3.1.1 Condition Assessment

Interviews were conducted with officials of all short line railroads to determine whether or not they were 286,000 lbs. GWR capable. For those railroad properties that the officials deemed not capable of 286,000 lbs. GWR, information regarding track and bridge conditions was requested. These data were then evaluated using a decision matrix that is described below.

2.3.1.2 Decision Matrix

The State of Indiana acquired the American Short Line and Regional Railroad Association HALImpact model (Zeta-Tech Associates, Inc. Version 1.0.0, April 2001)

The HALIimpact model contains decision matrices addressing rail, tie, and ballast. These decision matrices take into consideration annual traffic tonnage, operating speed, and track characteristics (rail size, number of good ties per 39 foot rail, and ballast depth). The default values presented in the decision matrices were used to determine whether or not a particular track item was OK, marginal (needs rehabilitation for the long-term), or should be replaced to reach 286,000 lbs. capability. See Table 2-9.

2.3.1.3 Unit Cost Data

Unit costs for the replacement and rehabilitation of items are presented below. These costs were derived from many sources, including bid prices from recent similar projects, the consultant's cost library, and actual costs provided by short line railroads.

Track Structure

Rail, used, jointed, 115 lbs. or better Includes rail, other track material (OTM), installation.	$250,000 per track mile
New ties, wood, installed	$50.00 each
Ballast, 2 inches, lined and surfaced	$15,000 per track mile

Table 2-9 Decision Matrices for Rails, Ties, and Ballast

RAILS

Operating Speed	Rail Size (lb/yd)	Traffic Density (MGT/year) < 1	1-5	5-10	> 10
Less Than 10 mph	> 115	OK	OK	OK	OK
	110-114	OK	OK	OK	OK
	90-99	OK	Marginal	Marginal	Marginal
	< 90	Marginal	Marginal	Replace	Replace
10 to 25 mph	> 115	OK	OK	OK	OK
	110-114	OK	OK	Marginal	Marginal
	90-99	Marginal	Marginal	Replace	Replace
	< 90	Replace	Replace	Replace	Replace

TIES

Operating Speed	Good Ties/Rail	Traffic Density (MGT/year) < 1	1-5	5-10	> 10
Less Than 10 mph	20	OK	OK	OK	OK
	15	OK	OK	OK	OK
	10	OK	Marginal	Marginal	Replace
	5	Replace	Replace	Replace	Replace
10 to 25 mph	20	OK	OK	OK	OK
	15	OK	OK	Marginal	Marginal
	10	Marginal	Marginal	Replace	Replace
	5	Replace	Replace	Replace	Replace

BALLAST

Operating Speed	Ballast Depth (under tie) Good	Poor	Traffic Density (MGT/year) < 1	1-5	5-10	> 10
Less Than 10 mph	6	8	OK	OK	OK	OK
	4	6	OK	OK	OK	OK
	2	4	OK	Marginal	Replace	Replace
	None	None	Replace	Replace	Replace	Replace
10 to 25 mph	6	8	OK	OK	OK	OK
	4	6	OK	OK	Marginal	Replace
	2	4	Marginal	Replace	Replace	Replace
	None	None	Replace	Replace	Replace	Replace

Bridges

New pre-cast concrete trestle $3,500 per track foot

New steel bridge $3,500 per track foot

Rebuild wood bridge $2,500 per track foot

Assumes spot replacement of timber stringers with steel stringers, and timber caps with concrete caps.

Rehab wood bridge $1,000 per track foot

Assumes the spot replacement of timber stringers with steel stringers.

Rehab steel bridge $1,000 per track foot

Assumes the addition or a steel plate to the bottom of bridge beams. The plates would be welded to bottom flanges.

Rehab concrete bridge $1,800 per track foot

Assumes a simple strengthening technique of using carbon fiber reinforced polymer (CFRP). The concrete is coated with a polymer, and a carbon fabric is set in the polymer and covered by another coat of polymer. This process in repeated until the desired strength is achieved.

Estimated Up-Grade Costs

Quantities used for estimating (length of track, ballast segment, bridge length, etc.) were determined through interviews with the particular railroad or by using track charts. Unit prices were then applied to the quantity of each individual item.

2.3.2 Summary of 286,000 lbs. GWR Capabilities and Capital Requirements for Indiana Short Lines.

Of the 37 short line railroads, 12 are currently capable of handling 286,000 lbs. GWR carloads. These railroads operate 321 route miles, about 26 percent of short line route miles in Indiana, and handled about 6 percent of short line carloads in the year 2000.

Three short lines operating 22 miles indicate that they do not foresee a need for 286 GWR capability.

The remaining 22 short lines have varying capital needs totaling $99.5 million. About one-third of this amount is related to the upgrading of bridges; the remainder is related to track structure, including ballast, ties, and rail. These short lines operate 885 route miles, about 73 percent of short line mileage in Indiana, and handled about 93 percent of short line carloads in the year 2000. About one-half of these short lines are primarily grain haulers.

The total capital requirement of $99.5 million is an order-of-magnitude estimate with no contingency estimate included.

3.0 BENEFITS OF RAIL FREIGHT SERVICE IN INDIANA

Railroads are a vital component in the nation's economy. Railroads move over 40 percent of all ton-miles of intercity freight, nearly as much as trucks, barges, and airlines combined. The nation's railroads carry:

- 70 percent of automobiles and trucks
- 64 percent of coal
- 40 percent of grain
- 20 percent of chemicals

In addition to the transportation utility provided, the nation's railroads have a direct economic impact of $21 billion in wages and retirement benefits, and in the past five years have spent between $5 billion and $7 billion each year, on new equipment, roadway, and structures. The cost of providing railroad services, as measured by revenue per ton mile, has steadily decreased from a 1985 level of 3.04 cents to a 2000 level of 2.26 cents.

Railroads provide an essential component of the multimodal transportation system in Indiana. Although most of the rail network is privately owned, it creates substantial public benefits. The freight moved by railroad is of great commercial value to Indiana industries and agricultural producers. The loss or impairment of rail services would have significant impact on businesses, cities, and rural communities. Moreover, the loss or impairment of rail services would increase truck traffic in Indiana, and impact highway users and transportation agencies. With the possible exception of some petroleum and chemical products, truck transportation is the only alternative for the movement of freight on land.

Improvements in freight rail service can be expected to have important economic effects. Low cost and better service in freight movement have a positive effect on all Indiana firms engaged in the production, distribution, trade, and/or retail sale of physical goods. Reducing the per-mile cost of goods carriage means that any production facility can serve a wider market area, with potential gains from scale efficiencies. It also means a factory can draw supplies from a wider area with potential gains in terms of the cost and/or quality of parts and materials coming to the factory. The Federal

Highway Administration's (FHWA) Benefit-Cost Analysis Study describes the research documenting this benefit.

The key point identified in the FHWA study is that if businesses can reduce total logistics costs, including inventory and warehousing, by increasing expenditures on freight transportation, they can be expected to do so. The study cites several companies that increased their use of transportation, which in turn allowed them to save money by closing warehouses, increasing inventory turnover, and reducing employment.

The following classification scheme exemplifies the benefits associated with improvements in freight transportation. It was developed as part of the FHWA study.

Effects of Improved Freight Transportation

First-order Benefits	Immediate cost reductions to shippers, including gains to shippers from reduced transit times and increased reliability.
Second-order Benefits	Reorganization-effect gains from improvements in logistics. Quantity of firms' output changes; quality of output does not change.
Third-order Benefits	Gains from additional reorganization effects, such as improved products or some other change.
Other Effects	Effects that are not considered as benefits according to the strict rules of benefit-cost analysis, but may still be of considerable interest to policymakers. These could include, among other things, increases in regional employment or increases in rate of growth of regional income.

In 1999 the railroads in Indiana originated or terminated approximately 100.1 million tons of freight having an estimated value of approximately $83 billion.

In terms of tonnage, railroads in Indiana haul the equivalent of about 2.5 million truck loads per year. For purposes of example, should the tonnage currently carried by rail be transported on the Indiana road system, about $350 million in additional annual road maintenance would be needed (a 150-mile average haul and an even split between interstate and local road use was assumed in this example). A large-scale traffic shift such as this would increase highway congestion, reduce overall travel speeds, increase fuel consumption and other vehicle operating costs, and increase automobile emissions. Moreover, highway accidents, fatalities, and property damage would increase. Congestion is a growing concern in the I-80/90 corridor across the northern part of the state, as well as on I-465 around Indianapolis. Indiana motorists are already experiencing congestion-related delays and increasing fuel costs. These delays and costs would increase severely if there is a dramatic increase in truck traffic due to the impairment or elimination of rail freight service.

The importance of railroads in Indiana is further demonstrated by the release of the report *Indiana Shippers Perspective* (INDOT MultiModal Division, Rail Section) in December 2000. In that report, the results of a shipper survey regarding the impact of the Conrail acquisition by CSXT and NS railroads were documented. Grain shipper respondents indicated that 82 percent used rail to move the majority of their shipments and 64 percent considered themselves dependent on rail. Eighty percent of coal respondents reported that more than 50 percent of their shipments are transported by rail, and 33 percent consider themselves dependent on rail. Eighty-three percent of respondent fertilizer shippers transport primarily by rail, while 60 percent feel they are dependent on rail.

Railroads directly impact the Indiana economy by employing 5,821 persons (in 2000), and have a payroll of approximately $333 million. In addition, freight railroads also pay property taxes, diesel fuel taxes, and sales taxes on goods purchased in the state.

Amtrak expended $15.8 million for goods and services in Indiana in fiscal year 2001. Most of these expenditures occurred in the following locations:

- Gary $7,182,070
- Indianapolis 2,184,669

- Cedar Lake 1,748,029
- Beech Grove 1,657,520
- Elkhart 638.207
- Rochester 298,205
- Valparaiso 320,274

Improvements in freight rail service provide positive economic impacts for the State of Indiana. These benefits accrue to industry and to highway users.

3.1 Short Line Role

The Indiana short line railroad situation is somewhat unique when compared with other midwestern states. Typically, Midwest short lines are highly dependent upon the carriage of grain products for their revenues. In the Indiana situation, however, the top three short lines, which account for about 73 percent of all short line carloads handled, carry coal, metals, and chemicals as their principal commodities (675,330 carloads). However, once these lines are accounted for, the remaining picture becomes more conventional, with farm products and agribusiness being the dominant business sectors.

The top three short line carriers have a healthy carloads-per-mile statistic, with the least of the three handling 441 carloads per mile of route. The relatively high traffic densities of these short line railroads result from two serving the heavy industrial areas on the southern border of Lake Michigan, with the third benefiting from strong coal, petroleum, chemical, and lumber movements in the central section of the state. It is noted, however, that none of the top three short lines are currently 286-GWR capable. These three railroads have indicated a need for 286 capability.

The importance of short lines in Indiana is demonstrated by the fact that they serve 62 counties, of which 15 are rail-served exclusively by short lines. In terms of cities and towns in Indiana, 86 are served exclusively by short lines. Lists of counties, cities, and towns where short lines are the only rail access are contained in Appendices C and D.

3.2 Economic and Environmental Benefits

In Indiana, the Class I railroads serve 152 grain elevators and 26 feed mills/processing facilities. The short lines serve over 30 grain elevators and over 50 other facilities directly related to Agribusiness. Twenty-three short line railroads listed agribusiness products within the top three commodities they transported. These 23 short lines handled 16 percent of the total short line carload business.

In 1999, Indiana had a gross state product of more than $182.2 billion and ranked 15th in the nation. Agriculture accounts for about 1 percent of the state's economic production, which is about the same as for the nation. In 2001, Indiana had 6,300 farms encompassing 15.4 million acres. The average size of an Indiana farm was 244 acres. Cash receipts for Indiana farmers for crops and grains amounted to $2.8 billion. Agribusiness within the state generates $5 billion in commodity trade. Agribusiness includes business beyond the farm level, including food manufacturing, wholesaling, and retailing. Examples are businesses that operate grain, feed, storage, and processing facilities. In addition, agribusiness has an important impact on banking, insurance, and suppliers of farm implements and other services.

Agribusiness operates in a highly competitive business environment. A relatively minor increase in delivered price of an agricultural product can significantly impact competitiveness. Transportation costs are an important component of agribusiness production pricing. In addition, Indiana agribusiness competes in the highly competitive international market. The Agribusiness Council of Indiana (ACI) estimates that 25 percent of Indiana's agribusiness is transacted in the international

market. Because U.S. farms produce more than is consumed domestically, maintaining a competitive international agribusiness is critical to maintaining the viability of U.S. agribusiness as a whole. The impact of agricultural exports on the economy is far reaching. Every dollar of exports generates an additional $1.31 in economic activity in supporting sectors. Greater competition from overseas suppliers exacerbates the adverse effects of inefficient transportation.

Because railroads provide the lowest-cost land transportation for bulk commodities, they are an integral part of agribusiness. In particular, the short lines are important because they reach into rural areas and bring the benefits of lower transportation cost to help keep farms productive and competitive. In some cases, however, short lines are in danger of going out of business because revenues are not adequate to match operating and/or track/bridge rehabilitation expenses.

The abandonment of a short line railroad can impact rural communities and local economies in a variety of ways. Railroad-served customers will shift to trucks, which increases transportation costs and makes businesses less competitive. In some cases, the higher transportation costs can put a business out of business. The transfer of rail movements to trucks accelerates the deterioration of local roads and highways, adds to traffic congestion, and increases noise and air pollution. It should be noted that a state study found that 62.1 percent of the 46,446 miles of county paved roads already require improvements. As short lines primarily serve rural communities, it is the county road network that would handle the additional truck traffic resulting from a rail abandonment. This is particularly true in southern Indiana, where many counties lack access to interstate highways and rely on minor arterial and collector roads as the primary transportation infrastructure.

Further, rail abandonment can affect social costs such as personal income, taxes, and unemployment and welfare benefits. Also, rail abandonment affects property values and detracts from the region's ability to attract new business. For example, energy and processing/manufacturing industries that require shipments of large or heavy equipment and bulky material are unlikely to locate in a community without rail access.

Indiana has been and will continue to be interested in the health of its short line railroads. Periodically, Indiana will be faced with making rail continuation/assistance decisions regarding a particular short line. The choice is normally between (1) permitting abandonment to take place, thus accepting any social costs that result from the abandonment, or (2) continuing rail service through government or shipper subsidies/grants. Over the past 20 years, Indiana has provided assistance to Class II and Class III railroads for rehabilitation or construction of infrastructure through the Industrial Rail Service Fund (IRSF). The ISRF is further explained in section 6.2.3 of this report.

3.3 Public Funding Impact Analysis

The purpose of impact analysis is to identify and evaluate the total impacts of discontinuing rail service on a particular line, including social, economic, environmental, and other contributing factors. The following paragraphs describe the general factors to consider before making a railroad investment decision. There are two categories of benefits/costs, primary and secondary. Primary benefits are those benefits gained directly from the rehabilitation or improvement project. Secondary benefits are those benefits that are in an indirect consequence of the rehabilitation or improvement project.

3.3.1 Economic Benefits and Costs

Economic Impact

Abandonment of the rail line will require customers that previously relied on rail service to use alternate means of freight transport. The substitute mode usually results in an increase in cost over the rail service previously provided. With an increase, the added transport costs could cause some firms to transfer elsewhere or to close. Other firms will remain at their existing locations, but may be forced to reduce profits, increase prices, and reduce production or employment.

Job losses directly resulting from a rail service discontinuance are likely to produce a reduction in local wages and personal income. This reduction in jobs, wages, and income may induce a decline in the number of employees in service and service-related industries (local government, retail trade, insurance, public utilities) that the community can support because fewer goods and services are purchased in the community. The community is also adversely affected because the short line railroad no longer pays taxes.

Unemployment Cost

Temporary unemployment losses may occur due to abandonment of a rail line. For example, some shippers may be unable to absorb or pass on the increased transport costs resulting from the abandonment. Subsequent job losses may occur due to reduced production, transfer of operations, or plant closing. In addition, railroad employees may be laid off.

Business Relocation

Discontinuance of rail service could cause rail customers and other businesses to move to a different location.

Employment Benefits

Should the rail line be rehabilitated, new jobs could be created as a result of continued and expanded rail service, and the projects associated with the rehabilitation of the rail line. On the other hand, should the rail line be abandoned, it is possible that new jobs will be created in the trucking industry because of the shift of freight from rail to truck.

3.3.2 Highway Benefits and Costs

Increased Road Maintenance and Infrastructure Projects

Firms relying on rail service would be required to truck their products to and from the nearest alternative railhead. The fact that the commodity would already be on a truck increases the likelihood that it could be trucked all the way to its destination. The additional truck traffic would cause additional wear and tear on the highway system, reducing pavement service life expectancy and increasing road maintenance costs. In particular, discontinuance of short line service usually affects rural areas where roads can be less substantial and in poorer condition than in urban areas. The greater amount of fuel used by trucks per unit of freight carried increases dependence on foreign oil.

Road and Fuel Tax

If a rail line is abandoned, truck traffic increases. Additional truck traffic results in increased user revenues from the trucking industry, including fuel taxes and vehicle registration fees.

3.3.3 Environmental

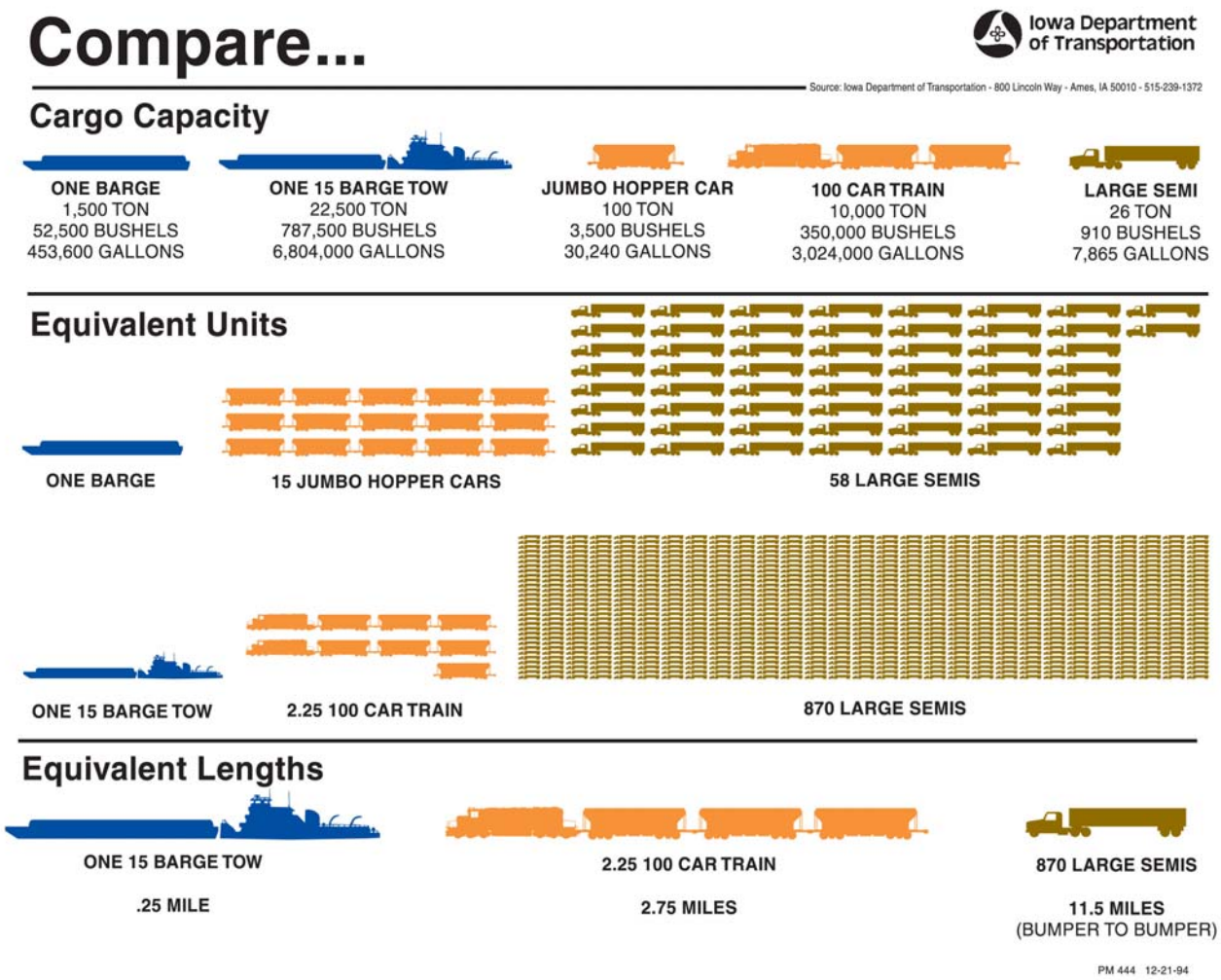
Air Quality and Emissions

Generally, there will be an increase in air pollution as a result of a rail service discontinuance resulting from the shift of rail freight to trucks. Air pollution is usually accounted for by calculating the change between rail and truck of these pollutants: carbon monoxide(CO), nitrogen oxides (NO_x), sulphur dioxide (SO_2), particulate matter (PM), and lead (Pb). Figure 3-1 presents a comparison of the relative efficiency of the surface modes, as well as their cargo capacity. It is provided through the courtesy of the Iowa Department of Transportation.

3.3.4 Railroad Funding Benefit Methodology

As a part of this Rail Plan, a railroad funding benefit methodology has been developed to estimate the economic and environmental impacts of railroad investment. Refer to Appendix E.

Figure 3-1 Comparison of Efficiency and Cargo Capacity of Freight Surface Modes



3.4 Short Line Network That May Require Public Investment

Three factors were considered in the following analysis to determine what Indiana short line railroads may not have sufficient revenues to cover long-term maintenance costs, and therefore may require long-term public investment. These factors are:

- Carloads per mile. A threshold of 50 carloads per mile (either loads originated or terminated) is used as a general indicator of economic viability. Railroads handling below 50 carloads per mile generally have difficulty meeting long-term maintenance needs. The 50-carloads-per-mile threshold is based upon research conducted by the Federal Railroad Administration (FRA) in the late 1970s. For railroads 15 miles or longer, questionable difficulty ranged between 70 and 30 carloads per mile; for shorter railroads, the range was between 80 and 25 carloads per mile. The 50-carloads-per-mile threshold selected for use herein represents the approximate midpoint of the two ranges. The FRA research has become a general industry standard. The difficulty range is also affected by the commodity mix and the per-carload average revenue.
- 286,000 lbs. Capability. The growing importance of 286 capability will affect the viability of a given line, especially if its major commodities are bulk materials such as grain and farm products.
- Traffic trends. Carload data for individual short lines were studied for the period 1999 to 2001 to develop an overall business trend as either upward, unchanged, or downward.

A three-tiered stratification was developed to determine the level of difficulty any given railroad has (based on the three factors) meeting long-term maintenance needs without public investment. The stratification is as follows:

Level 1 - Most Difficulty
Short line railroads affected by all three evaluation factors: 50 carloads per mile or below, need for 286 capability, and a negative traffic trend (through 2001):

- Elkhart & Western Railroad Company
- Indiana Northeastern Railroad Company
- Indiana Southwesten Railway Company
- Madison Railroad

Level 2 – Moderate Difficulty
Short line railroads affected by two evaluation factors - 50 carloads per mile and below, and either a need for 286 capability or a negative traffic trend (through 2001):

- Dubois County Railroad Company – Need 286 capability
- BeeLine Railroad, Inc. – Need 286 capability
- A&R Line, Inc. – Negative traffic trend

Level 3 – Minor Difficulty
Short line railroads having a traffic factor of 50 carloads per mile, or below, but neither of the other factors:

- J.K. Line, Inc
- The Indiana & Ohio Railway
- Port Authority of Auburn, Indiana, Railroad
- Hoosier Heritage Port Authority
- Logansport & Eel River Short Line, Inc.

See Figure 3-2 and Figure 3-3 for the locations of the above-referenced short line railroads.

Condition Assessment Qualifiers

Factors other than providing transportation and economic benefits to a community may affect a railroad's financial condition. An example is revenue from the storage of surplus rail cars, excursion train revenue, or leases of excess property. As these other sources of revenue are not generally reported by short lines, they have not been included in the above analysis. Depending on the level of such revenue, the ability of a short line to meet its long-range capital and maintenance needs without public assistance may vary.

The above stratification and evaluation is based on very general information and is intended to serve only as an indicator of potential conditions and as a guide for INDOT to anticipate future funding needs**. No representation as to the actual viability of the individual railroads mentioned above is intended or implied herein.**

4.0 RAIL INTERMODAL FACILITIES

Rail intermodal facilities can be classified into two major categories: containerized and break bulk. Containerized facilities in Indiana are located on CSXT at Indianapolis and Evansville; on Norfolk Southern at Fort Wayne; and on the Toledo, Peoria & Western at Remington. Intermodal service is also available to Indiana shippers who can be efficiently served from rail intermodal terminals located in adjacent states, such as terminals at Chicago, Cincinnati, and Louisville.

To a large extent, the marketing of containerized—TOFC/COFC—rail intermodal freight service has been performed by third-party logistics entities, such as the Hub Group, Inc. These firms perform the direct retail marketing with a large percentage of intermodal customers. These third-party enterprises contract with the rail line-haul carrier for specified levels of annual volume commitments. Thus, a shipper receives a single freight bill from the third-party enterprise for the bundled service of local drayage and line-haul rail. Rail carriers do, however, market directly to certain segments of their intermodal business such a United Parcel Service, motor common carriers such as J.B. Hunt and Schneider National, and steamship lines.

4.1 Indiana Intermodal Development

The potential expansion of containerized—TOFC/COFC—rail intermodal freight service in Indiana can take several generalized forms. One is additional service in existing lanes, which would provide an increase in service and possibly be more truck competitive. A second form of expansion is new service between markets not currently served. A third form is the introduction of emerging intermodal technology in short haul markets.

Since approximately three-quarters of Indiana interstate freight tonnage is truck traffic, the market is large. However, the majority of Indiana interstate truck tonnage originates or terminates in the adjacent states of Illinois, Ohio, Kentucky, and Michigan. Thus, rail intermodal service is at both a service and cost disadvantage, attributable to the relatively short hauls to/from adjacent states. Rail intermodal service generally requires a line-haul of 500 to 600 miles in order to generate sufficient revenue to cover the terminal expenses and take advantage of rail line-haul efficiencies.

The first form of expansion, the expansion of service in existing corridors, occurs when one or more trains is added to a rail market that currently exists. The particular challenge is to gather enough additional traffic to justify the additional expense. More frequent service can be expected to improve the reliability of service, but cannot be sustained in the long-term without a corresponding increase in volume.

Figure 3-2 Short Lines That May Require Investment – NORTH

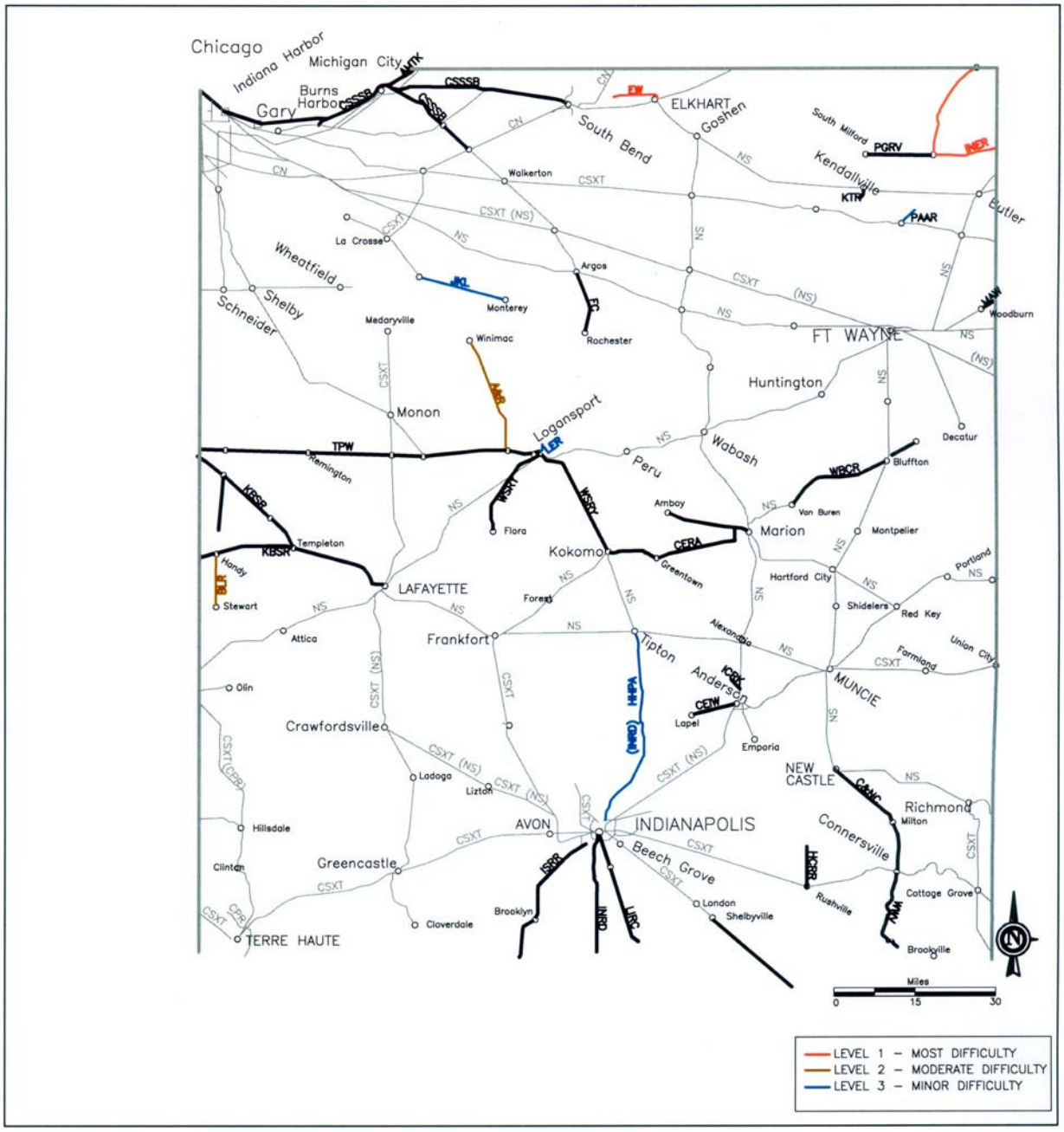
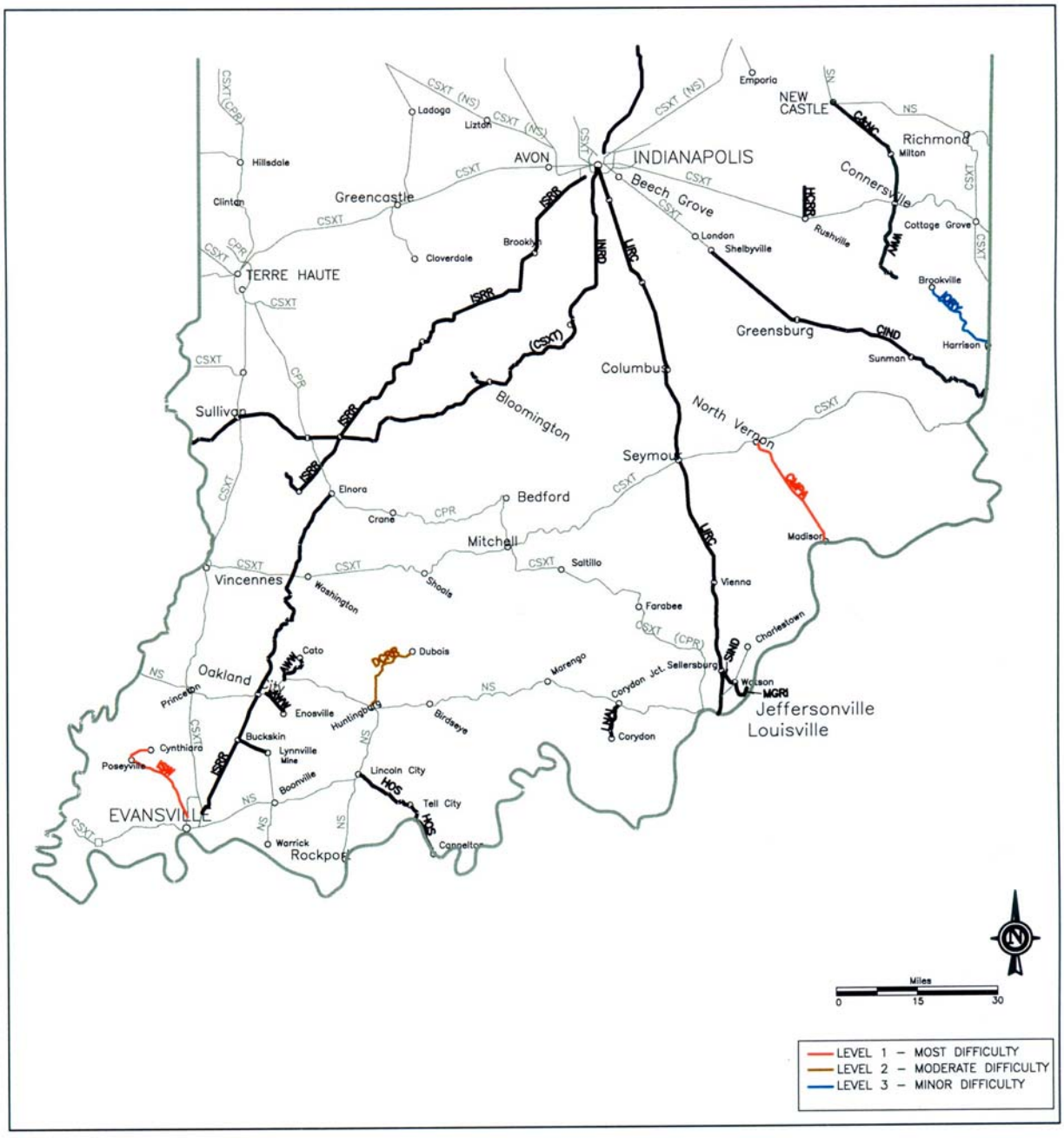


Figure 3-3 Short Lines That May Require Investment – SOUTH



The second form of intermodal expansion, new service between new markets not currently served, is much more challenging. This is compounded by the possible need to construct new intermodal terminals with significant capital investment. The fact that the rail carrier is currently not in either market may indicate a perceived lack of prospects for garnering sufficient traffic to cover costs in the near term.

For the most part, rail intermodal service, particularly in non-doublestack markets, has not achieved satisfactory revenue to variable cost (R/VC) ratios. The low R/VC ratios for some intermodal traffic, particularly TOFC, have prompted rail carriers either to close certain low-volume terminals or to withdraw TOFC from certain origin-destination (O-D) pairs. A R/VC ratio less than 110 percent cannot be justified unless the prospects for improved revenues, lower costs, or both, can realistically be achieved in the near term.

The third form of intermodal expansion addresses the largest truck market segment, short hauls of less than 500 to 600 miles. This market has historically not justified entry by rail carriers because of substantial service and revenue inadequacies associated with conventional intermodal operations. Two unconventional intermodal technologies currently in service are RoadRailer® and *Expressway*. Norfolk Southern's Triple Crown Services, Inc., utilizes RoadRailer® equipment, as does Burlington Northern and Santa Fe Railway, Canadian National Railway, and Amtrak. As a specialized service directly marketed by Triple Crown Services (TCS), the combination of low capital investment in both terminals and locomotive horsepower per TCS train (as a result of bi-modal technology) produces a low cost structure. Low cost combined with above-average unit revenue for a highly tailored, motor carrier quality service (e.g., Just-In-Time), permits entry into markets in which both rail boxcars and conventional intermodal are not attractive to either the carrier or the shipper.

The other technology is the articulated platform that Canadian Pacific Railway operates with the brand name *Expressway.* In its Montreal–Toronto–Detroit corridor, CP utilizes 10 five-platform articulated cars. Each platform can accommodate a 28-to-57-foot trailer. The bridge plate between platforms remains in place during train movement. The terminal does not require trailer lifting equipment or reinforced trailers. *Expressway* service is offered in partnership with trucking companies, and this frequent, reserved-space service has been experiencing considerable growth. Trucking companies continue to perform the pick-up and delivery function, and thereby retain commercial control of the transaction with the shipper. With *Expressway's* ability to provide a reliable, efficient line haul function combined with low cost terminal facilities, motor carriers can substitute attractive rail line haul costs for their own line haul. At present, CP is the only operator of this equipment.

4.2 CSX Intermodal, Inc. (CSXI) and CSXT in Indiana

CSXI is a subsidiary of CSX Corporation and markets containerized (trailers and containers) intermodal service, both domestic and international. Because it is a unit of CSX Corporation, the major portion of CSXI's nationwide network utilizes the CSXT rail system for line haul movements.

The CSXI nationwide network consists of 48 terminals, including two in Indiana: Indianapolis (Avon) and Evansville. The Indianapolis terminal is operated under a turnkey contract for CSXI. The Evansville terminal is directly operated by CSXI. No intermodal service is operated between the two terminals.

At both Indianapolis and Evansville, peak volume days are Thursday and Friday, and at the end of the month and quarter. Both terminals have two side-loaders and two in/out lanes. Steamship and parcel traffic primarily moves under transportation contracts, while intermodal marketing companies' (IMC) traffic moves under tariffs that may or may not change frequently, based on market opportunities.

Each terminal has 7 personnel plus an additional 5 people performing maintenance functions, for a total of 12. In addition to the 12 individuals at each terminal, there are drayage personnel and other

overhead-related staff for an estimated grand total of about 100 individuals attributable to CSXI operations in Indiana.

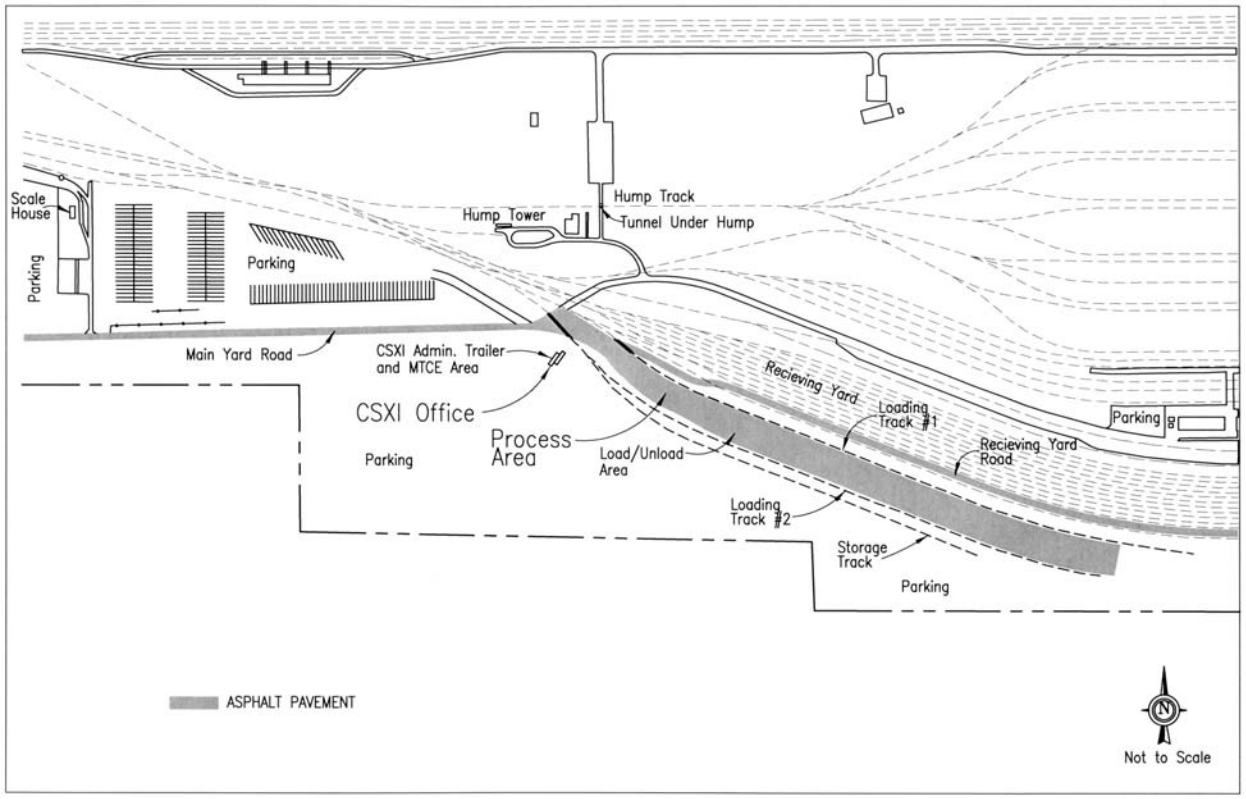
Determining what drayage distance is economically viable on a trailer/container load involves several factors, including whether there is a lengthy drayage at just one or both ends, commodity and unit revenue, and whether there is a backhaul available. In some instances a dray of 100 to 125 miles at one end may be economically justifiable if the above factors are favorable.

4.2.1 Indianapolis

This intermodal terminal occupies 25 acres at Avon Yard, with room for future expansion of the facility. Refer to Figure 4-1 for the layout. Indianapolis is served by two eastbound and two westbound intermodal trains. Westbound traffic to East St. Louis, including interchange traffic, is minimal at Avon.

The volume in the year 2001 was 24,000 lifts; in the year 2000 the volume was 23,000. A major customer is United Parcel Service with significant volumes to the Worcester, MA sort center and Little Ferry, NJ, near the UPS sort center at the Meadowlands. The Indianapolis traffic is primarily outbound (eastbound) with a split of about 50 percent containers and 50 percent trailers.

Figure 4-1 CSX Intermodal Facility, Avon (Indianapolis)



CSXI's service design plan at Indianapolis consists of 10 O-D pairs, four of which are Canadian points. The U.S. markets, in addition to Little Ferry, NJ, and Worcester, MA, are Boston, MA; Springfield, MA; Philadelphia, PA; and Syracuse, NY. CSXI selects specific markets for which it will ordinarily build a "block" of rail cars at Indianapolis. Across its intermodal network, CSXI will assess shippers a $2,000 surcharge for each move made where the O-D lane is not specifically offered and CSXI agrees to provide customized service. Baltimore–Indianapolis, for example, is not an O-D pair offered by CSXI.

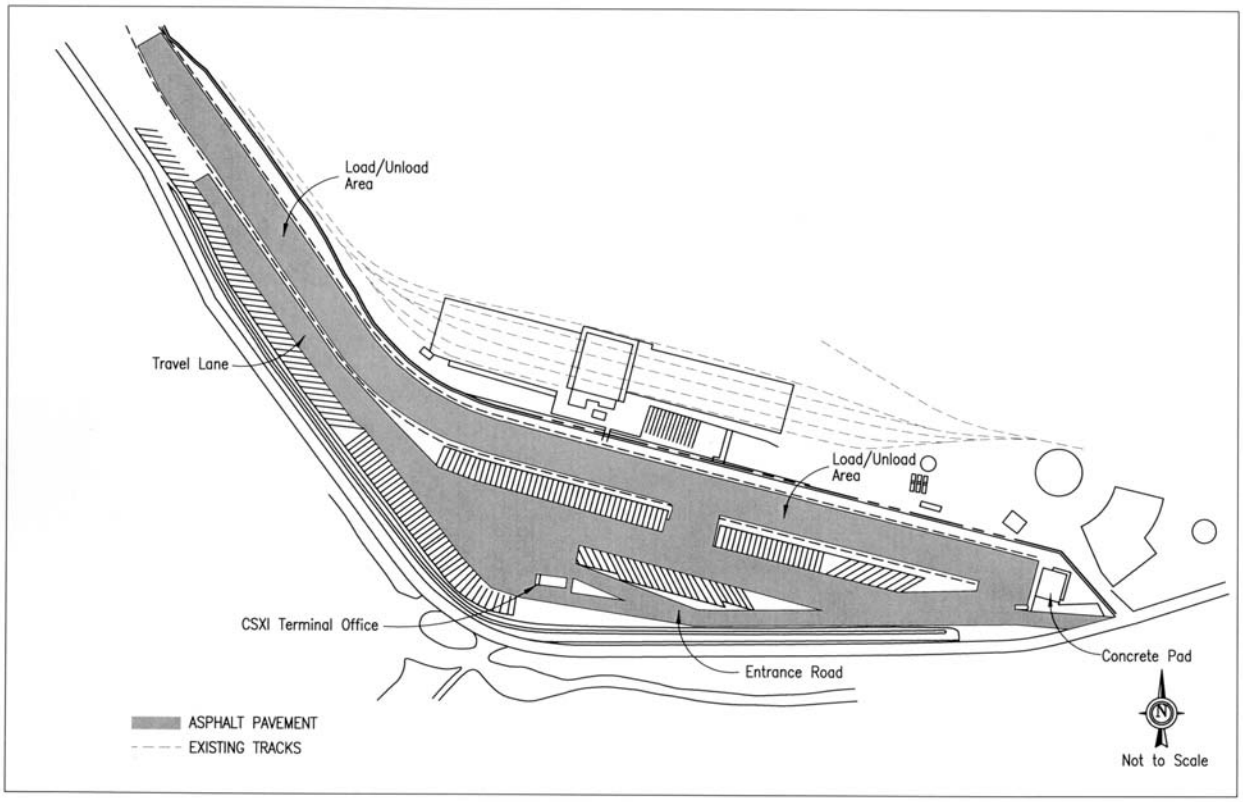
4.2.2 Evansville

The intermodal terminal (Figure 4-2) occupies 17 acres at Howell Yard in Evansville, with little or no room currently available for facility expansion.

Evansville is served by one northbound and one southbound train operating in the corridor between Chicago, Nashville, Atlanta, and Jacksonville. The volume in the year 2001 was 23,000 lifts. In the year 2000, the volume was 24,000. The terminal is currently operating at about 75 percent capacity. The equipment split is about 65 percent containers and 35 percent trailers. A major inbound customer is land-bridge (water/rail) container traffic to Toyota, Inc. A major outbound customer is Whirlpool, Inc. to the southeast, including Atlanta and Florida, as well as containers to the west coast.

Significant demand for eastbound service from Evansville has not materialized. Such service would have to operate via Chicago, in the absence of a through train. CSXI's service design plan at Evansville has substantially more O-D pairs than its terminal at Indianapolis, including 39 points that are off-line to CSXT, including Canada and Mexico. CSXI also offers service between Evansville and the CSXI terminal at Bedford Park in Chicago, IL, a line haul of less than 300 miles, with a second morning delivery, and for which no direct Interstate Highway alternative exists.

Figure 4-2 CSX Intermodal Facility, Evansville



4.3 Norfolk Southern Railway / Triple Crown Services, Inc.

Triple Crown Services, Inc. (TCS) is a wholly-owned subsidiary of Norfolk Southern Corporation. TCS is a truckload transportation company utilizing carless, bimodal RoadRailer® trailer technology to combine both over-the-road and rail line haul movement. The TCS fleet consists of 5,500 trailers that are 53 feet long and 102 inches wide, with slack-free coupling for movement in dedicated TCS trains. The headquarters and principal hub of TCS operations is Fort Wayne, IN. There are 11

other TCS terminals, including Toronto, Dallas, and Mexico City, which are off-line points to NS. TCS is currently authorized by the Federal Railroad Administration to operate trains up to 125 RoadRailer® trailers long.

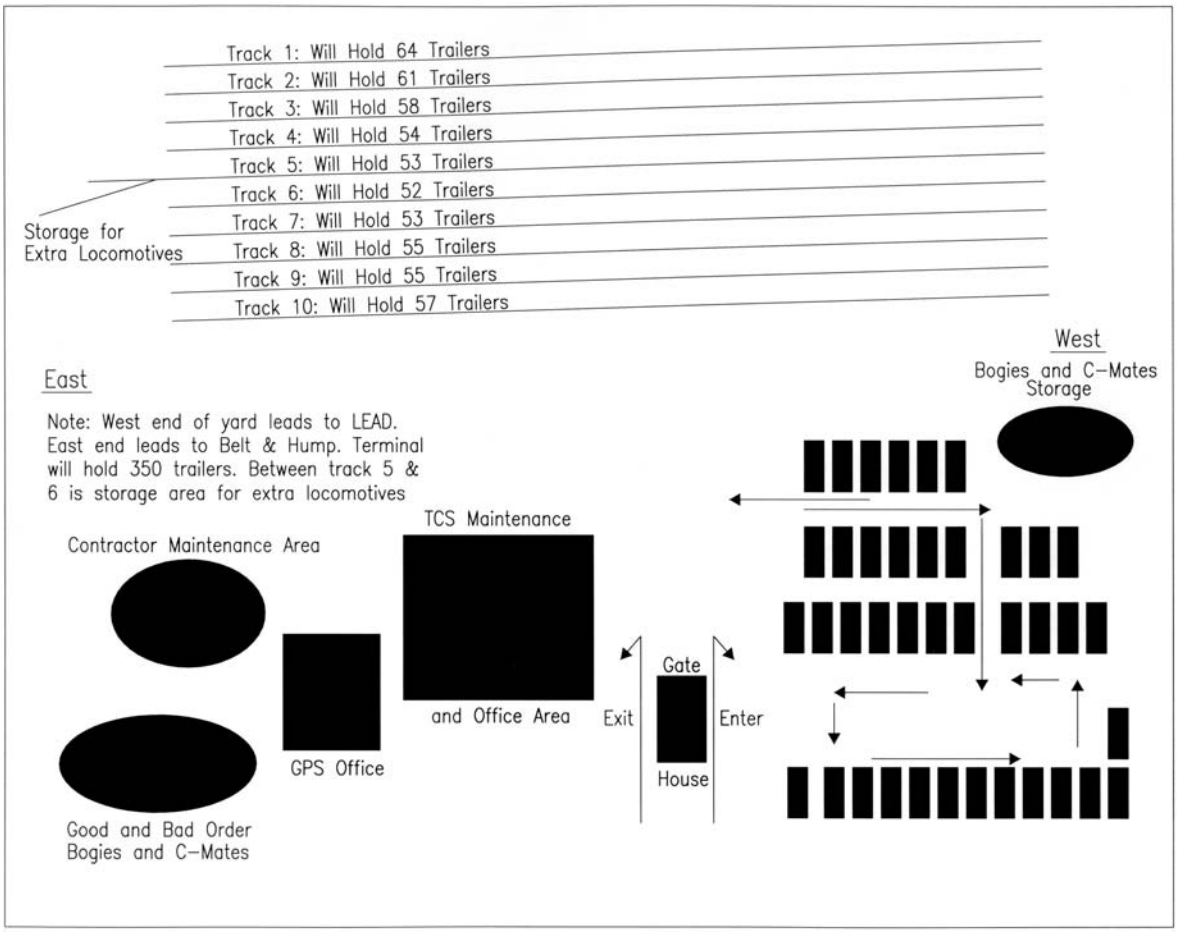
Service lanes available at Fort Wayne are St. Louis, MO; Kansas City, MO; Dallas, TX; Atlanta, GA; Jacksonville, FL; Harrisburg, PA, and northern New Jersey. The primary traffic lanes at Fort Wayne are Atlanta, Kansas City, and Harrisburg. TCS principal commodity market is automotive parts in those markets where rail boxcar service is not competitive. Other principal TCS commodities include appliances, paper, printed materials, and food.

In the year 2001, TCS at Fort Wayne handled 46,000 loads, approximately 60 percent of which was originating traffic. In the year 2000, TCS at Fort Wayne handled 42,000 loads. In 1995, the volume was 29,000. TCS estimates that all its traffic would otherwise move in line haul by truckload motor carriers.

The TCS terminal at Fort Wayne consists of 10 tracks, each about 2,900 feet in length. Parking capacity is about 200 trailers. Figure 4-3 shows a functional configuration of the Fort Wayne TCS Yard. There is a need for terminal expansion, but the facility is essentially land-locked. One alternative to create capacity is a network blocking strategy that would permit certain TCS trains to bypass the Fort Wayne hub. The average drayage distance is 75 to 80 miles. On average, 20 closely coordinated TCS trains utilize the TCS hub at Fort Wayne per weekday, with the typical train size being 73 units, powered normally by a single, high-horsepower locomotive.

There are approximately 45 TCS employees and 35 contractor employees at Fort Wayne.

Figure 4-3 Norfolk Southern Triple Crown Services Terminal, Fort Wayne



4.4 Toledo, Peoria & Western Railway

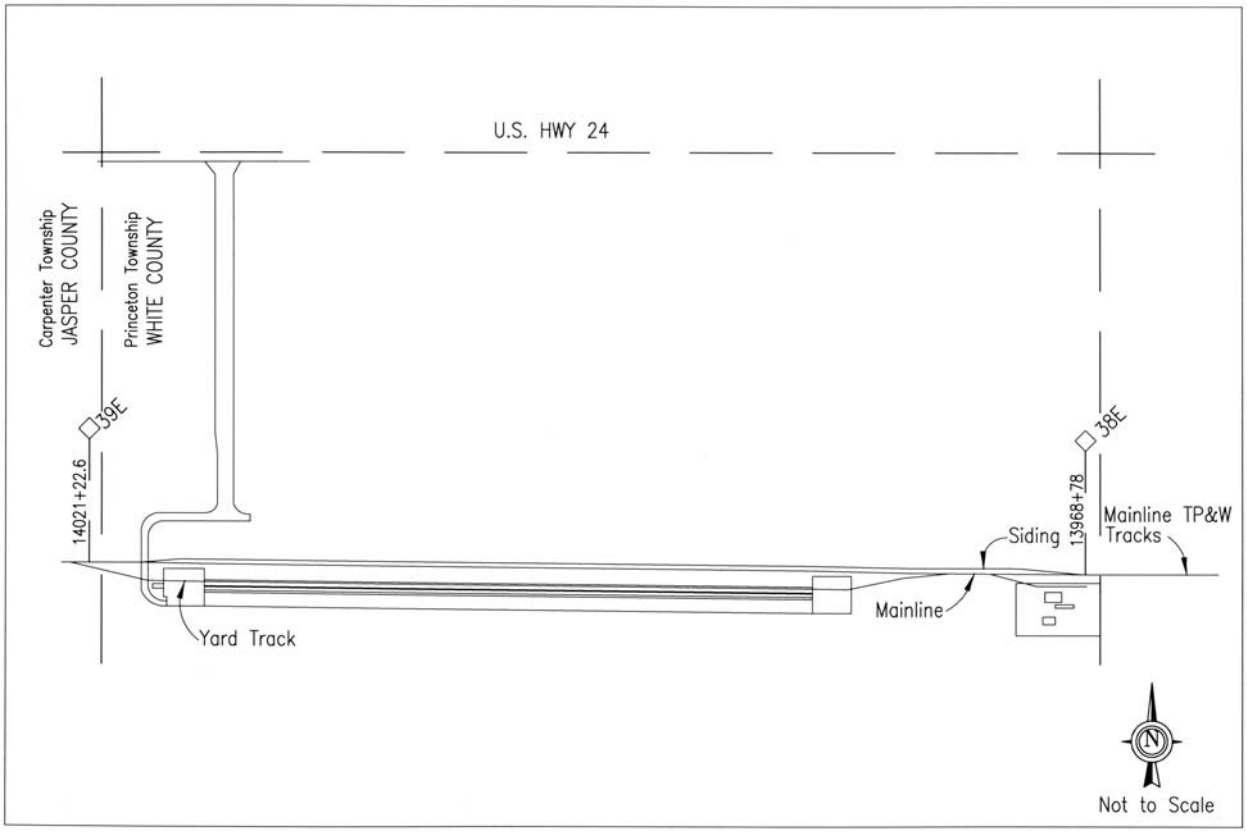
The Toledo, Peoria & Western Railway (TPW), a unit of RailAmerica, Inc., operates an intermodal terminal at Remington, adjacent to I-65 in Jasper County. This terminal (Hoosier Lift) was established by the Santa Fe Railway during the period it controlled the TPW. The terminal has an annual capacity of about 35,000 lifts. See Figure 4-4.

In the year 2001, the Remington terminal handled 5,000 lifts. The volume varies annually by plus/minus 1,000 lifts. The traffic is predominantly inbound.

The BNSF at Galesburg, IL, and CN-IC at Gilman, IL, are the intermodal interchange partners. Transit time to the west coast is 5 days. Train service is once per day, overnight to/from the interchanges, but longer than via Chicago area terminals, such as Willow Springs (BNSF), Corwith (BNSF), and Harvey (CN-IC).

Much of Remington terminal's traffic competes with the Chicago area intermodal terminals, which offers more opportunities for back haul and access to a chassis pool.

Figure 4-4 TPW Intermodal Facility, Remington



Some traffic at Remington utilizes I-65 for long drays, including to/from Louisville, nearly 200 miles.

TPW regularly examines short haul intermodal possibilities but has not yet found the right market and economics to offer the service. TPW route remains a future possibility for by-passing the Chicago terminal area. Estimates of the increase in annual intermodal lifts at the 26 Chicago area intermodal terminals over the next 20 years are expected to increase from the present 4.6 million to 11 million. Freight train movements are also expected to increase, by about 80 percent to nearly 2,400 per day. The TPW has the potential to become a through route from the BNSF at Galesburg to the NS at Logansport and CSXT at Watseka, IL, and Reynolds, IN.

4.5 Market Potential

There are a limited number of O-D pairs offered by CSXI at Indianapolis. O-D pairs have not been expanded to CSXI terminals that existed prior to the Conrail acquisition. With the recent expansion of terminal capacity at Atlanta, GA (Fairburn), the addition of an Atlanta/Indianapolis lane may be feasible if line congestion and capacity issues would not impede a reliable, quality service. CSXT has not previously operated intermodal service on the Indianapolis Subdivision between Cincinnati and Indianapolis. Similarly, CSXI currently does not offer a lane between Evansville and Atlanta.

4.5.1 Articulated Intermodal Technology

As noted elsewhere in this Rail Plan Update, the largest potential market for rail intermodal service is the short haul market segment. This is also the market in which it is most difficult for rail to compete profitably. Nevertheless, since 1996 the Canadian Pacific Railway (CP) has provided a short haul intermodal service in the Montreal–Toronto–Windsor–Detroit corridor. CP utilizes 10 five-platform, slack-free articulated cars. Each platform can accommodate a 28-to-57-foot trailer. The bridge plate between platforms remains in place during train movement. The CP terminal operation does not require trailer lifting equipment, reinforced trailers, or other than very basic facilities to perform its function. Approximately 40 trailers can be loaded or unloaded in about 45 minutes. This service, branded *Expressway* by CP, is offered in partnership with trucking companies and has been experiencing considerable growth for this frequent, reserved space, two-trains-per-day service. CP anticipates handling 100,000 trailers in 2002, compared with 60,000 in 2001. Trucking companies continue to perform the pick-up and delivery function, and thereby retain commercial control of the transaction with the shipper. CP currently is the only operator of this equipment.

Truck traffic moving on the I-65 corridor through Indiana between Louisville, KY, and Chicago, IL, could be a target for diversion to rail intermodal such as *Expressway*. The rail distance between Louisville and Chicago is approximately the same as between Montreal and Toronto, between which CP operates its *Expressway* service. Norfolk Southern does provide a non–time-sensitive service between Louisville and Chicago, requiring 50 hours between cut-off time at Louisville and availability at Chicago (Landers). CSXI does not operate a terminal in the Louisville area. Since there are several possible rail routes between Louisville and Chicago, each would have its unique capital program needs, including any necessary vertical clearance improvements, in order to make the route a reasonably efficient one for intermodal service. CP has a combination of ownership and trackage rights on CSXT on one of the routes between Louisville and Chicago.

An indication of the potential I-65 market lane is that the Louisville region is served by 92 motor carriers, including most major trucking companies. In addition, Louisville is the international air freight hub for United Parcel Service, and handles the 12th largest amount of air cargo tonnage in the world.

Application of the *Expressway* technology to a Louisville–Chicago route also creates the possibility of utilizing RailAmerica's TPW line to reach western markets. This possibility retains the niche market feature of *Expressway* technology while utilizing a Chicago bypass route. Since this service concept requires substantial utilization of trackage rights, INDOT, as a method of encouraging the service and improving the economics of the service, might consider either subsidizing the trackage rights fees which would be volume-related and thus reflect traffic diversions of traffic from the Indiana highway network to rail, or subsidizing the capital improvements necessary to make the service time-competitive. By example, the Virginia Department of Transportation is considering more lanes of highway on the 325-mile Interstate 81 in the Shenandoah Valley, one of the busiest routes in the country, with 4.5 million large trucks per year on certain segments. Norfolk Southern is working with VDOT on studies of major improvements to its parallel rail line that could divert about 1,000 heavy trucks per day from I-81 at a comparatively modest cost compared to the $2 billion program cost of widening I-81. Other environmental benefits would also accrue as a result of a diversion of trucks to rail.

4.5.2 Bulk Intermodal

Rail/highway bulk intermodal is a term used to describe the movement of dry or liquid commodities by a combination of rail cars and highway trailer. A substantial portion of the rail traffic base in Indiana consists of rail/highway bulk intermodal, with rail for the line haul and highway at either one or both ends of the commodity flow.

Various other services may be offered in conjunction with the above, such as inventory status and reporting through real time database access.

4.5.2.1 CSX Transportation

CSXT offers a complete logistics service to Indiana rail shippers and receivers. This product is branded Transflo Logistics Services, a subsidiary of CSX Corporation, and is marketed to shippers of plastics, food-grade products, chemicals, waste products (such as municipal solid waste), minerals, construction materials, and commodities in import/export trade. The services include product transfer, on-site management, facilities management, inventory management, and quality control. These facilities are located in Indiana at East Chicago, Evansville, Indianapolis, Jeffersonville, and Lafayette.

In addition, CSXT offers transloading service for certain commodities through public distribution centers in Evansville, Fort Wayne, Indianapolis, New Albany, and Mount Vernon at the Southwind Maritime Centre. Grain has a unique transloading and value-added network. CSXT serves 75 grain elevators and 14 feed mills in Indiana.

4.5.2.2 Norfolk Southern Railway

NS offers shippers a logistics management system comparable to CSX's, known as Modalgistics. NS, however, utilizes primarily independent bulk transfer facilities. It does operate a Thoroughbred Bulk Transfer (TBT) facility in Indiana at Whiting as an NS-controlled, full-service facility, one of 30 TBT terminals on the NS network. The independent bulk transfer facilities in Indiana utilized by NS are located at Delphi, Dunkirk, Elkhart, Elwood, Evansville, Fort Wayne, Goshen, Hammond, Indianapolis, Jeffersonville, Lafayette, Lawrence, Logansport, Poneto (Wells County), Portage, South Bend, and Waterloo. In Indianapolis, NS also utilizes, via trackage rights, the lumber reload center of The Indiana Rail Road Company.

For the agribusiness industry, NS serves 77 grain elevators and 12 processing mills in Indiana. NS originates approximately 30 percent more grain tonnage in Indiana than CSXT, suggesting a larger average tonnage volume per elevator for NS than for CSXT, since each carrier serves about the same number of elevators in Indiana.

4.5.2.3 Short Lines

Since short line traffic bases have a narrower commodity mix than CSXT and NS, bulk transfer facilities are characterized as niche market facilities that can provide a service that is complementary to the line haul rail carriers. In addition, some short lines have proportionately more public “team” tracks as an inducement to off-line industries. The Indiana Rail Road, for example, maintains a team track at most stations, as well as bulk transfer and distribution facilities in Indianapolis and Bloomfield, including a lumber reload facility with indoor and outdoor storage at its Senate Avenue Terminal in Indianapolis.

The Louisville & Indiana Railroad, having a diversified commodity mix, is able to more widely reach the Louisville metropolitan area by means of its transloading facility in Jeffersonville, IN, as well as a covered dock facility for handling Amtrak Express traffic, including U.S. Mail. In addition, LIRC has extensive break bulk traffic related to the nearly 1,000-acre Clark Maritime Centre, which handles diversified commodities.

4.5.3 Water Port Intermodal

The Indiana Port Commission is a state authority consisting of three public ports. The three ports are International Port/Burns Harbor at Portage, IN; the Clark Maritime Centre at Jeffersonville, IN; and the Southwind Maritime Centre at Mount Vernon, IN. The International Port at Portage is served by NS, as well as the Indiana Harbor Belt Railroad for its connecting carriers. The Clark Maritime Centre is served by CSXT, Louisville & Indiana Railroad, and MG Rail, Inc., a division of Consolidated Grain & Barge Company. The Southwind Maritime Centre is served by CSXT and has a direct rail-to-water coal transloading facility capable of serving utility coal customers.

In the year 2000, the three public ports handled 6 million tons of merchandise, including coal, grain, steel, and fertilizer. Rail handled nearly 4 million tons of the above total volume. The largest proportion of this rail volume was at the Southwind Maritime Centre, which handles substantial coal traffic. This port is currently being tested as a rail-to-water transloading site for Powder River Basin coal destined to southern electric utilities.

While containerized traffic represents a negligible volume at these ports, the Port Commission is reviewing the potential for moving some commodities currently moved in bulk in containers. There is an increasing demand to preserve the integrity of the commodities, such as soybeans, corn, and specialty grains, with well defined specifications. Increased demand by consumers world-wide for organic food contributes to this trend. Bulk cargoes could utilize empty containers, which are steam-cleaned and pest-free, and which need to be repositioned from the U.S.A. to Asian and European markets.

The ability of the rail mode, including short lines, to tailor a competitive transportation product will determine whether rail will continue to maintain market share for a commodity, like grain, that is expected to undergo an increasing amount of market segmentation related to transportation.

Tell City River Port is owned by the City and operated by the Perry County Port Authority, which also operates the Hoosier Southern Railroad (HOS) which interchanges with the Norfolk Southern at Lincoln City, IN. The HOS commenced operations in 1995 restoring an out-of-service line acquired from NS. The Hoosier Southern handles approximately 2,500 carloads annually, including about 1,000 carloads from water to rail, primarily pig iron, coal, and other bulk commodities.

4.5.4 Other Ohio River Ports

Numerous private port facilities are located along the 358 miles of the Ohio River bordering Indiana. Major shippers include Southern Indiana Gas & Electric, Alcoa, Marathon Ashland, American Electric Power, and Indiana-Kentucky Electric Corp. According to the U.S. Army Corps of Engineers, in 1999 nearly 40 million tons of commodities, primarily coal, was moved by barge to, from, or within Indiana on the Ohio River. However, the shipments were served by direct water-to-destination port facilities, and the commodities being shipped did not enter Indiana's rail network.

5.0 RAIL PASSENGER ISSUES

5.1 Current Services

5.1.1 Amtrak

Amtrak officially began service in the United States on May 1, 1971. The name Amtrak is the blending of the two words "American" and "Track," although the official name of the company is the National Railroad Passenger Corporation. Throughout the years, Amtrak has taken over the passenger operations for other railroad corporations and today it is the only significant intercity passenger rail service in the United States. Throughout the nation,

- Amtrak serves more than 500 stations in 45 states on more than 22,000 route miles.

- Amtrak owns approximately 730 route miles and uses track owned by freight railroads over the remainder of the United States.
- Excluding commuter trains, Amtrak operates approximately 265 trains on a normal weekday, transporting a total of approximately 61,000 passengers each day. During the 2000 fiscal year, Amtrak served 22.5 million people.
- Amtrak operates 2,188 railroad cars and 343 locomotives (278 diesel and 65 electric) and employs over 25,000 people.
- Amtrak employs 1,233 Indiana residents; the majority of these work at the Beech Grove Maintenance Facility.
- In addition to its national service, Amtrak also operates commuter rail service for seven state and regional authorities in the United States and provides maintenance for the Sounder Commuter Rail Service in Seattle, Washington.
- Amtrak is the largest contract-commuter service provider in the nation.
- Maintenance facilities are located in Wilmington and Bear, Delaware; Beech Grove, Indiana; Boston, Massachusetts; Chicago, Illinois; Hialeah, Florida; Los Angeles and Oakland, California; New Orleans, Louisiana; New York City, Niagara Falls, and Rensselaer, New York; Seattle, Washington; and Washington, D.C.
- The ten busiest Amtrak train stations are in New York City; Philadelphia, Pennsylvania; Washington D.C.; Chicago, Illinois; Newark, New Jersey; Los Angeles, California; Trenton, New Jersey; Baltimore, Maryland; Boston Massachusetts; and Princeton Junction, New Jersey.

As part of Amtrak's national service, eight named trains provide service to at least one of the 13 stations located in Indiana. These lines are the Capitol Limited, the Cardinal, the Kentucky Cardinal, the Lake Shore Limited, the Pennsylvanian, Three Rivers, Twilight Limited (service between Chicago, Illinois, and Pontiac, Michigan), and Lake Cities (service between Chicago, Illinois, and Detroit, Michigan). All Amtrak trains serving Indiana require reservations.

Indiana stations are located in the cities of Connersville, Crawfordsville, Dyer, Elkhart, Hammond-Whiting, Indianapolis, Lafayette, Jeffersonville, Michigan City, Nappanee, Rensselaer, South Bend, and Waterloo.

Table 5-1 summarizes Amtrak ridership by station in Indiana for the five-year period 1996 through 2000.

Table 5-1 Amtrak Ridership by Station

Years 1996 – 2000

Station	1996	1997	1998	1999	2000	2001	Year 2000 Trains/day
Connersville	380	387	442	429	518	513	0.9
Crawfordsville	1,084	1,129	1,570	1,940	2,455	2,232	2.0
Dyer	784	754	870	850	1,118	1,085	2.0
Elkhart	14,136	12,692	13,680	15,735	15,884	14,437	4.0
Hammond-Whiting	25,799	28,592	27,350	26,258	24,327	18,575	10.0
Indianapolis	12,587	11,736	19,697	15,825	20,958	19,012	2.0
Jeffersonville	--	--	--	--	6,309	5,551	2.0
Lafayette	2,802	3,202	2,792	6,899	9,219	9,334	2.0
Michigan City	3,175	3,250	3,308	2,688	2,369	1,469	2.0
Nappanee	--	--	3,213	2,612	2,566	3,019	2.0
Rensselaer	547	565	802	936	1,166	1,076	2.0
South Bend	14,954	16,348	17,920	18,577	18,984	18,723	6.0
Waterloo	13,413	17,687	19,564	22,176	22,469	22,291	6.0
Total	89,661	96,342	111,208	114,925	128,342	117,317	--

Total ridership at Indiana stations has grown at an average rate of 7.5 percent in the 1996 through 2000 period. Excluding the two stations, Jeffersonville and Nappanee, that were not in service for the entire period, the average rate of ridership growth was 6.2 percent.

Annual rates of changes in ridership at Indiana stations are indicated in Table 5-2.

Table 5-2 Annual Percentage Change in Amtrak Ridership by Station

Years 1997 - 2000

Station	1997	1998	1999	2000	2001
Connersville	+ 1.8	+ 14.2	- 2.9	+ 20.7	- 1.0
Crawfordsville	+ 4.2	+ 39.1	+ 23.6	+ 26.5	- 9.1
Dyer	- 3.8	+ 15.4	- 2.3	+ 31.5	- 3.0
Elkhart	- 10.2	+ 7.8	+ 15.0	+ 1.0	- 9.1
Hammond-Whiting	+ 10.8	- 4.3	- 4.0	- 7.4	- 23.6
Indianapolis	- 6.8	+ 68.0	- 19.6	+ 32.4	- 9.3
Jeffersonville	--	--	--	Note	- 12.0
Lafayette	+ 14.3	- 12.8	+ 147.0	+ 33.6	+ 1.2
Michigan City	+ 2.4	+ 1.8	- 18.7	- 11.8	- 38.0
Nappanee	--	--	- 18.7	- 1.8	+ 17.7
Rensselaer	+ 3.2	+ 41.9	+ 16.8	+ 24.6	+ 7.7
South Bend	+ 9.3	+ 9.6	+ 3.7	+ 2.2	- 1.4
Waterloo	+ 31.9	+ 10.6	+ 13.4	+ 1.3	- 0.8
Total	+ 7.5	+ 15.4	+ 3.3	+ 11.7	- 8.6

Note: Amtrak service to Jeffersonville commenced in the year 2000.

While Amtrak's Hammond-Whiting station has the largest ridership in Indiana, ridership at the station during the period in question decreased, counter to the statewide trend. While Amtrak has shown growth at South Bend, the proximity of the Niles, MI, station on the Michigan Service line, with four trains per day to/from Chicago, impacts Amtrak ridership potential between South Bend and Chicago. The decline in ridership at Michigan City may be attributable to a schedule change that made a day trip to Chicago, using the one daily train in each direction, impossible.

Lafayette displayed exceptional growth in ridership for Amtrak in the years 1999 and 2000.

The following is a description of each passenger train serving Indiana.

The Capitol Limited provides daily service between Chicago and Washington, D.C., with stops in South Bend and Waterloo, Indiana. The content of this train includes coaches, sleeping cars, a dining car, and a Sightseer Lounge car.

The Cardinal provides service three days a week between Chicago and Washington, D.C., and makes stops in Dyer, Rensselaer, Lafayette, Crawfordsville, Indianapolis, and Connersville. The content of this train includes coaches, sleeping cars, a dining car, and a Sightseer Lounge car. It is combined with the Kentucky Cardinal (see below) between Chicago and Indianapolis.

The Kentucky Cardinal provides daily service between Chicago and Louisville, KY, with stops in Dyer, Rensselaer, Lafayette, Crawfordsville, Indianapolis, and Jeffersonville. It is combined with the Cardinal, between Chicago and Indianapolis, on the days that the Cardinal operates. The content of this train includes coaches. The Cardinal's dining car and lounge are available when the two trains are combined.

The Lake Shore Limited provides daily service between Chicago and New York City with stops in Hammond-Whiting, South Bend, Elkhart, and Waterloo. The content of this train includes coaches, sleeping cars, a dining car, and a lounge car.

The Pennsylvanian provides daily service between Chicago and New York City with stops in Hammond-Whiting, South Bend, Elkhart, and Waterloo*.* The content of this train includes coaches, sleeping cars, and a dinette car.

The Three Rivers provides daily service between Chicago and New York City with stops in Hammond-Whiting and Nappanee. The content of this train includes coaches, sleeping cars, and a lounge car.

The Wolverine (Eastbound) and the ***Twilight Limited*** (westbound) provide daily service between Chicago and Pontiac, with a stop in Hammond-Whiting. The content of these trains includes coaches and a café service car.

Lake Cities This train provides daily service between Chicago and Detroit, with stops in Hammond-Whiting and Michigan City. The content of this train includes coaches, café service car, and a Midwest Business Class car.

Table 5-3 shows the stations each Amtrak train serves in Indiana.

Table 5-3 Amtrak Trains Through Indiana, and Stations Served

Station	Capitol Limited	Cardinal	Kentucky Cardinal	Lake Shore Limited	Pennsylvanian	Three Rivers	Twilight Limited	Lake Cities	Wolverine
Connersville		X							
Crawfordsville		X	X						
Dyer		X	X						
Elkhart				X	X				
Hammond-Whiting				X	X	X	X(W)	X	X(E)
Indianapolis		X	X						
Lafayette		X	X						
Jeffersonville			X						
Michigan City								X	
Nappanee						X			
Rensselaer		X	X						
South Bend	X			X	X				
Waterloo	X			X	X				

Amtrak stations provide different levels of amenities and services for the traveler, depending on the level of traffic and local participation. Table 5-4 shows the amenities and services offered at each of the stations.

5.1.2 The Northern Indiana Commuter Transportation District (NICTD)

The Northern Indiana Commuter Transportation District (NICTD) operates the SouthShore commuter rail line that connects Northern Indiana with Chicago, Illinois. The SouthShore line began as a private streetcar line in 1903 with service between Indiana Harbor and East Chicago, Indiana. Over the years, the line has grown to encompass 20 stations between downtown Chicago and South Bend, Indiana. The SouthShore Line is now a public entity devoted to providing patrons with a viable alternative to the automobile. NICTD owns approximately 130.4 miles of track. It also owns 41 1982 electric multiple-unit cars, seven 1992 electric multiple-unit cars, ten 1992 trailer cars, ten 2001 electric multiple-unit cars, and one locomotive. There are approximately 13,565 passengers on a weekday with a regular service schedule, and 3,210 on an average weekend. There were a total of 3,610,964 riders during the 2000 fiscal year.

The SouthShore Line has 12 stations located in Indiana: Hammond; East Chicago; Clark Road; the Metro Center and Miller stations, in Gary; Ogden Dunes, in Portage; Dune Park, in Chesterton; Beverly Shores, in Porter County; 11th Street and Carroll Avenue, in Michigan City; Hudson Lake, in LaPorte County; and the South Bend Airport.

Daily westbound service to Chicago begins at 4:02 a.m. from the Carroll Avenue Station and ends with the final complete run at 7:48 p.m. to Chicago and a run from South Bend to Carroll Avenue at 9:50 p.m. Weekday service from Chicago begins at 4:30 a.m. from Carroll Avenue to South Bend; complete runs from Chicago begin at 6:10 a.m., with a final run at 12:45 a.m. Westbound weekend service to Chicago begins at 5:20 a.m. and ends with a final complete run to Chicago at 8:40 p.m. and a final run between South Bend and Carroll Avenue at 10:40 p.m. Eastbound service from Carroll Avenue to South Bend begins at 5:45 a.m. and from Chicago to South Bend at 8:00 a.m.; service ends with a final run at 12:45 a.m.

Table 5-4 Services and Amenities Provided at Amtrak Stations in Indiana

	Connersville	Crawfordsville	Dyer	Elkhart	Hammond-Whiting	Indianapolis	Lafayette	Jeffersonville	Michigan City	Nappanee	Rensselaer	South Bend	Waterloo
Staffing													
Staffed				X	X	X						X	
Un-Staffed	X	X	X				X	X	X	X	X		X
Amenities													
Enclosed waiting area			X	X	X	X	X	X		X		X	
Checked Baggage Service				X	X	X						X	
Help With Baggage												X	
Restrooms				X	X	X	X			X		X	
Payphones	X	X	X	X	X	X	X	X	X	X	X	X	X
Restaurant						X							
Snack Bar								X					
Vending				X	X		X					X	
Parking													
Free Short-Term Parking	X	X	X	X	X	X	X	X	X	X	X	X	X
Paid Short Term Parking													
Free Long-Term Parking	X	X	X	X	X		X	X	X	X	X	X	X
Paid Long-Term Parking						X							
Accessibility													
Accessible	X	X		X	X	X	X				X	X	
Not Accessible			X					X	X	X			X
Local Transportation													
Taxis on Call	X	X		X	X	X	X	X	X			X	
Bus Service		X				X	X	X					

Each station has a variety of services and amenities to aid customers while they wait for the train. All the stations on the SouthShore line have an enclosed waiting area. Table 5-5 shows the services and amenities available at each of the stations.

Table 5-5 Services and Amenities Provided at SouthShore Line Stations in Indiana

	Hammond	East Chicago	Clark Road (Gary)	Metro Center (Gary)	Miller (Gary)	Ogden Dunes (Portage)	Dune Park(Chesterton)	Beverly Shores (Porter County)	11th Street (Michigan City)	Carroll Avenue (Michigan City)	Hudson Lake (LaPorte County	South Bend Airport
Staffing												
Staffed	X	X		X						X		X
Unstaffed			X		X	X	X	X	X		X	
Amenities												
Enclosed waiting area	X	X	X	X	X	X	X	X	X	X	X	X
Restrooms	X	X		X			X	X		X		X
Payphones	X	X	X	X	X	X	X	X	X	X	X	X
Restaurant												X
Snack Bar	X			X								X
Vending							X					
Ticket Vending							X					X
Parking												
Free Short-term Parking	X	X	X		X	X	X	X	X	X	X	
Paid Short Term Parking				X								X
Free Long-Term Parking												
Paid Long-Term Parking												X
Wheel Chair Accessibility												
Fully Accessible	X			X		X	X			X		X
Partially Accessible												
Not Accessible		X	X		X			X	X		X	
Connecting Transportation												
Taxis on Call	X	X	X	X	X	X	X	X	X	X		X
Intercity Bus Service				X								X
Transit Service	X	X	X	X	X				X	X		X

5.2 Incremental Improvements on Passenger Rail Corridors

Amtrak was contacted regarding potential projects/improvements that could be made on their route network in Indiana to improve runtimes and dependability. Amtrak's Capital Infrastructure and Equipment Department responded with a list of 20 projects for the Cleveland-Chicago route, five projects for the Chicago-Detroit route, and three projects for the Chicago-Indianapolis route. At this writing, there is analysis underway regarding the routing of the Chicago-Cleveland route. The study is looking at a route passing through South Bend as well as a route passing through Fort Wayne. Therefore, consideration of improvements to the existing Chicago-Cleveland line is not addressed herein. Table 5-6 presents the potential projects/improvements Amtrak has recommended for the Chicago-Detroit and Chicago-Indianapolis routes.

5.3 Indiana in the Midwest Initiative

The Midwest Regional Rail Initiative (MWRRI) is a cooperative effort between Amtrak, the Federal Railroad Administration, and nine states, including Indiana, to develop an improved and expanded passenger rail system in the Midwest. The service would operate as a hub-and-spoke system with lines radiating from Chicago. Trains operating at speeds up to 110 mph would link Chicago with Milwaukee, Madison, and Minneapolis; Des Moines and Omaha; St. Louis and Kansas City; Indianapolis and Cincinnati; Grand Rapids and Detroit; and Toledo and Cleveland, as well as many smaller cities and towns. See Figure 5-1.

Table 5-6 Potential Projects/Improvements

Element	Begin MP	Distance	Host Carrier	Benefit	Total Cost(est.).	Minutes Saved(est.)
CHICAGO-DETROIT						
Engineering and Design – CP 482 Siding	241.0	3.0	Amtrak	Increased operational reliability	3,500,000	0
Design & construction of new station – Michigan City	229.5	0.1	Amtrak	Increase revenue	1,500,000	0
Eliminate Grade Crossing – MP 236.36	236.4	0.0	Amtrak	Safety improvement – redundant X-sing	100,000	0
Eliminate Grade Crossing – MP 229.55	229.6	0.0	Amtrak	Safety improvement – – redundant X-sing	100,000	0
Eliminate Grade Crossing – MP 229.65	229.7	0.0	Amtrak	Safety improvement – – redundant X-sing	100,000	0
CHICAGO-INDIANAPOLIS						
Install signal system – Ames to Indianapolis		30.0	CSXT	Increase train speed and safety	6,000,000	5
Replace jointed rail with welded – Monon to Ames		50.0	CSXT	Increase train speed and safety	9,350,000	5
Signal aspect improvements -- Indianapolis		0.0	CSXT	Increase train speed	1,000,000	5

Increased speeds and service efficiencies would reduce travel times dramatically. For example, the nearly nine-hour Chicago-Cincinnati and Chicago-Cleveland trips would be cut in half. These efficiencies would be achieved through state-of-the-art train communication and control systems, highway/railroad grade crossing safety enhancements, and rehabilitation of existing and construction of new track and sidings. More frequent service would also be offered.

The funding plan consists of a mix of sources, including federal loans and grants, state funding, general funds, and capital and revenue generated from system-related activities, such as joint development proceeds. Federal funding will be the primary source of capital funds.

Indiana, located in the heart of the Midwest and surrounded by numerous major population centers, is ideally situated to benefit from high-speed rail development. Travel of 150 to 300 miles is the distance at which high-speed trains compete most effectively with both the automobile and the airlines. The population of the cities in this ideal train travel zone surrounding Indiana is at least 30 million. Connecting Indiana's cities to this higher speed rail network offers a variety of benefits. The ease and efficiency of business travel is a primary benefit, both for the travelers and for cities that experience improved accessibility. Many downtown tourist destinations such as museums, sporting venues, and convention centers should also benefit from their proximity to centrally located stations. Other benefits of the mode include comfortable travel with minimal pollution, reduced congestion and energy consumption; ability to work or relax while traveling; limited land acquisition needs due to use of existing rights-of-way; urban development potential around central city rail stations; and efficient utilization of various travel modes due to intermodal connectivity with buses, airports, and local transit systems.

The plan for the Midwest high-speed rail network proposes higher-speed trains running primarily on existing, privately owned rail corridors. The interests of these freight railroads must always be kept in the forefront to assure that any plans do not cause any negative impact for the freight service. Routing studies are looking at how passenger trains can connect the major population centers while assuring that freight operations are not adversely affected. Ideally, improvements to the tracks should provide benefits to both the freight and passenger operations.

Of the federally designated high-speed rail routes through Indiana (See Figure 5-2), the most direct benefit to the state can be realized by first improving service on the Chicago–Indianapolis corridor. This route connects Indiana's two most populated regions (northwest Indiana and the Indianapolis

Figure 5-1 Midwest Rail Initiative Corridors

Figure 5-2 Federally Designated High Speed Rail Routes in Indiana

metropolitan area) and also connects to Chicago, the largest city in the Midwest. Extreme congestion of all transportation modes is evident in the region around the southern end of Lake Michigan. A dedicated route through this area for all passenger trains is a key issue being worked on by the states involved in the Midwest Initiative planning effort.

Because of the regional and national importance of keeping traffic moving through this area, the large costs associated with the necessary infrastructure improvements should be considered appropriate for a higher level of federal assistance. Once outside this area of extreme congestion, the route to Lafayette and Indianapolis has several ideal attributes. There is a low level of freight traffic density on this route, which means that initial service levels can be expanded with relatively few additional infrastructure requirements. Improvements on the route should focus on upgrading track conditions and grade crossing warning devices.

From Indianapolis, two routes have been federally designated, one extending to Louisville and the other to Cincinnati. Both of these routes are owned by "short-line" railroads with relatively low freight density. They have expressed a strong interest in seeing passenger rail services operate on their lines. Support and cooperation of the owner of the rail line is a very positive attribute of both of these corridors. Cost sharing with Kentucky and Ohio for improvements on these corridor segments is an issue that needs to be resolved. Although both routes are primarily in Indiana, the vast majority of the population served by the routes resides in the neighboring states.

Two routes traverse northern Indiana. One crosses the state running between Chicago and Cleveland, while the other connects Chicago and Detroit through Northwest Indiana. A study currently underway is analyzing two potential routes for the "Cleveland" corridor. Costs, ridership, revenue, freight conflicts, and ability to most adequately serve northern Indiana's population centers are all aspects of this analysis. The study will be completed later in 2002. The corridor to Detroit parallels the existing Northern Indiana Commuter Transportation District (NICTD) service and provides primary benefits to Michigan.

5.4 Regional Passenger Rail Planning Activities

Various Metropolitan Planning Organizations (MPOs) have a number of studies underway, or recently completed, involving passenger rail service. The following paragraphs provide a summary of these studies.

Northern Indiana Commuter Transportation District
West Lake County Corridor Major Investment Study

Prepared by TyLin Bascor in association with Al Chalabi, SEH, and SYSTRA
December 2000 (Executive Summary dated March 2001)

The Northern Indiana Commuter Transportation District completed a Major Investment Study (MIS) of several commuter rail options to evaluate the potential for expanded commuter rail service between northwest Indiana and Chicago. An MIS study is a federal requirement for potential improvements that are expected to have a significant effect on transportation in a region. The study explored proposed commuter rail service routes that incorporate the use of the former Monon Corridor with optional routing to Valparaiso on CN right-of-way or to Lowell on CSXT right-of-way. (Another route, to Crown Point, Indiana, along an abandoned Erie line, was eliminated from further consideration during the early stages of the MIS.)

The *Monon Corridor* is an alignment of approximately 27 miles that runs from Chicago to Munster, Indiana, and passes through many communities, including downtown Hammond and Munster.

The *CN alignment* from Chicago to Valparaiso includes the Chicago-to-Munster route described above and extends 26.6 miles along a southeast route from Munster to Valparaiso, for a total approximate length of 54 miles.

The *CSXT alignment* from Chicago to Lowell includes the Chicago-to-Munster route described above and extends 19 miles along a south route from Munster to Lowell, for a total approximate length of 46 miles.

The study concluded that the CN/Chicago-to-Valparaiso routing should be the locally preferred alternative (LPA) because it potentially offers the best balance between transportation benefit and cost. The CN alignment would directly serve Hammond, Munster, Highland, Griffith, Merrillville, Gary, Hobart, and Valparaiso and would indirectly benefit Shererville, Dyer, St. John, and Crown Point.

The next steps in the process include developing a local funding strategy, incorporating the LPA into the 2020 transportation plan, submitting a New Start application to the Federal Transit Administration, coordinating plans with the owning freight railroad, and proceeding with preliminary engineering.

Kentuckiana Regional Planning & Development Agency (KIPDA)

The Transit Authority of River City (TARC) has two light rail alignments that could potentially enter Indiana. These routes could affect railroad right-of-way. The first route would use abandoned right-of-way currently owned by CSX but formerly owned by Conrail/Penn Central. The right-of-way splits from the north-south Louisville and Indiana (LIRC) main line about one mile north of the Ohio River bridge and extends west to New Albany. There is discussion of using the right-of-way for Light Rail Transit (LRT). TARC has not undertaken any planning for that possibility. The second route corridor follows the general route of the (LIRC) main line crossing the Ohio River and continuing north on either the LIRC alignment or the presently-abandoned Jeffersonville Industrial Track. There have been no specific studies or planning regarding this route.

Indianapolis City–County, Department of Metropolitan Development, Planning Division
City of Indianapolis Comprehensive Rail Study

By R. L. Banks & Associates, Inc.; I. T. Business Corporation; and KPMG Peat Marwick
December 15, 1995

The study was undertaken to inventory and evaluate the existing rail system in the Indianapolis urbanized area. The study team examined rail network characteristics, operation, and use, as well as possible future developments, identified corridors with preservation potential, and catalogued possible funding sources for corridor acquisition or preservation.

In 1980, rail service in Indianapolis was provided by five Class I railroads. By 1995, Conrail was the predominant Indianapolis rail carrier. CSXT and four short lines (Indiana Rail Road, Indiana Southern Railroad, Louisville & Indiana Railroad, and Central Railroad of Indiana) also owned and/or operated track into the City of Indianapolis. Of these railroads, only the Indiana Railroad had a terminal facility within Indianapolis. The Hoosier Heritage Port Authority owns the former Nickel Plate line to Noblesville and Tipton. Excursion passenger and non-common carrier freight service are operated on this line.

The 1995 report stated that within the Indianapolis study area, the rail network consists of 190 route miles. Total track miles, including second main tracks, yards, and sidings, are much greater. Most of this rail network is in good condition for its present use. Train frequency varies from less than one train per day to more than 30 trains daily (on CSXT's Cleveland-St. Louis route). As of December 1995, the city's only intercity passenger service was Amtrak's Cardinal, running three times a week between Chicago and Washington via Indianapolis. (Today this service is supplemented by the Kentucky Cardinal, which provides daily service from Chicago to Louisville, via Indianapolis.)

In 1995, the study team rated the various Indianapolis area rail lines in terms of their traffic base; the higher the volume of traffic carried by a rail line, the less likely that line is to be sold or abandoned. Besides the Indianapolis Line (the main line), three Conrail branch lines were rated as "solid"—the

Hunter running track, the Arlington Avenue industrial track, and the Kraft running track. The other six lines branch lines were evaluated as "fair," "doubtful," and "uncertain."

Connections: Northeast Corridor Transportation; Northeast Corridor, Indianapolis, Indiana

Draft Environmental Impact Statement (DEIS)
September 2001

The Indianapolis Northeast Corridor study area is bounded by downtown Indianapolis on the south, Lawrence on the east, Noblesville on the north, and Westfield, Carmel, and Meridian Street, in Indianapolis, on the west. The study area is 26 miles long and 12 miles wide at its widest point. The Hoosier Heritage Port Authority (HHPA) Rail Corridor bisects the study area from north to south.

This DEIS examined both highway and transit alternatives to address growing traffic congestion and improve mobility in the northeast quadrant of Marion County and the southern part of Hamilton County. The existing transit service has increasing difficulty providing access to jobs in the rapidly developing markets of northern Marion and Hamilton counties. The DEIS included a range of alternatives, from maintaining the existing freeway system, to expanding bus transit in Marion and Hamilton counties, to building light rail and commuter rail transit. The primary impacts of the rail alternatives include proximity impacts to neighborhoods, historic resources, and properties with environmental contamination.

The DEIS considered six transit alternatives and six highway alternatives, plus no-build alternatives. The DEIS concluded that although a combined commuter rail/LRT alternative is the most expensive of the transit alternatives considered, it also offers the most benefits, including higher ridership than the other transit alternatives and a greater potential for positive benefits (such as new development) all along the alignment. Though it is the most costly of the transit alternatives, it is considerably less expensive than the highway alternatives also considered. It would also generally engender fewer environmental impacts than any of the highway alternatives.

The DEIS must be circulated for public review before preparation of the Final Environmental Impact Statement (FEIS). It is likely that the locally preferred alternative (LPA) would develop separately, as one highway alternative and one transit alternative.

In July of 2002, Indianapolis city planners announced that they would begin a new, $1.5 million transportation study of LRT and other alternatives. The study will consider a more extensive network, encompassing additional suburbs.

5.5 State Passenger Rail Planning Activities

The Indiana Department of Transportation has participated and continues to participate in a number of passenger rail planning activities. These activities are noted below:

- Early 1990s, *Chicago to Florida Corridor*. Indiana participated in the analysis of a new Chicago-to-Florida passenger rail route.
- 1996 to present, Indiana participates in the Amtrak Beech Grove Task Force, which works to promote and preserve jobs and business growth at Amtrak's Beech Grove Maintenance Facility, providing more than $2 million to help with facility upgrades.
- 1996, Indiana agrees to participate in the Midwest Initiative passenger rail study with eight other Midwest states, Amtrak, and the FRA. The study examines a network of interlinking passenger rail corridors, hubbed in Chicago, instead of focusing on just one particular corridor. Midwest Initiative work continues, with monthly meetings and the development of numerous sub-corridor studies, as listed below.

- *Indiana Passenger Rail Study*. Examines additional corridors in Indiana with potential for future passenger rail service. Corridors could complement the others that are proposed for development in the Midwest Initiative study (1997).
- *Gary Alternative Corridors Analysis*. Examines costs and benefits associated with the use of three different passenger rail routes between Lafayette and Chicago, each serving northwest Indiana and the Gary Airport in particular (1997).
- *South of the Lake Reroute Study*. Indiana is participating in a study, along with Michigan and Amtrak, to identify a new passenger-rail-only corridor through the highly congested area around the southern end of Lake Michigan. All eastern trains running from Chicago will benefit from decreased congestion that would result from this new corridor, because freight trains and passenger trains would not have to share heavily congested freight rail corridors (study still under way at time of this writing).
- *Northern Indiana/Northwest Ohio Routing Analysis*. A study recently begun that will examine the most cost-effective way to run trains through northern Indiana between Chicago and Cleveland. Two corridors will be studied in terms of construction costs, ridership, revenue, trip length, and other factors, while trying, if possible, to ensure that a plan is developed that will preserve good passenger rail service for all major metropolitan areas in northern Indiana (still under way at time of this writing).

- *Passenger Rail Statewide Public Communications Program*. Indiana DOT worked with a consultant to communicate information about ongoing passenger rail issues and plans and gathered input from citizens around the state (study completed in February 2002). The communications program was called the *Indiana Passenger Rail Initiative: Taking a Bold Track into a New Century.* More than 1,100 people attended public outreach meetings sponsored by Indiana DOT at seven locations during the summer and fall of 2001 to discuss the Indiana Passenger Rail Initiative. The public response was overwhelmingly in favor of INDOT's plans examining potential high-speed rail service in Indiana.

Intergovernmental Involvement

- Indiana DOT is working closely with leaders at both the state and national levels on passenger rail issues as the nation considers funding sources for potential passenger rail development (ongoing).
- Applications for Section 1103(c) grade crossing financial assistance. Indiana DOT has applied for and received funds from this program, which assists with crossing improvements on designated high-speed rail corridors. INDOT last received an award for $200,000 in 1999.
- Accelerated communications with neighboring states and local governments. Meetings with Ohio, Kentucky, and Michigan officials. Also with leaders from Indianapolis, Lafayette, South Bend, Fort Wayne, Gary, and other communities (ongoing).
- Indianapolis-to-Louisville Federal Corridor Designation Application. INDOT recently applied for (and achieved) an expansion of the Midwest Hub federally designated corridor to include a branch from Indianapolis to Louisville (2000). Indiana had previously applied for and received federal designation of the Chicago-Indianapolis-Cincinnati Corridor. Other federally designated routes are Chicago-Cleveland and Chicago-Detroit.

6.0 PUBLIC AND PRIVATE FINANCIAL ASSISTANCE PROGRAMS

6.1 Federal Financial Assistance Programs

Federal funding for railroad infrastructure projects are quite limited. In prior years, public funds to assist railroads in making infrastructure improvements came primarily from two sources, the Railroad Revitalization and Regulatory Reform Act (4R Act) of 1976 and the Local Rail Service Assistance

Act (LRSA). In 1998, the Transportation Equity Act for the 21st Century (TEA-21) created two new Federal credit programs: The Transportation Infrastructure Finance and Innovation Act of 1998 (TIFIA) and the Railroad Rehabilitation and Improvement Financing Program (RRIF). However, only limited funding has been provided under these programs in recent years as the federal government has worked out applicant and approval procedures. Section 7203 of TEA-21 amended Title V of the Railroad Revitalization and Regulatory Reform Act by replacing the railroad financing programs with new loan and loan guarantee programs. TIFIA funds were a part of the financing for the construction of the Alameda Corridor connecting the Ports of Los Angeles and Long Beach with major rail yards in the central Los Angeles region. To date, no budget submitted by the administration has included funding to support loans under the RRIF program and only three loans have been approved. Railroad funding programs, and highway funding programs that have an association with railroads, are discussed below.

6.1.1 Transportation Infrastructure Finance and Improvement Act (TIFIA)

TIFIA establishes a new federal credit program for large-scale transportation projects. Credit assistance programs such as TIFIA are designed to help financial markets develop the capability to supplement the role of the federal government in helping finance the costs of large projects of national significance.

Three types of credit instruments are permitted under TIFIA: secured (direct) loans, loan guarantees, and lines of credit. To be eligible, projects must cost at least $100 million or an amount equal to 50 percent of federal-aid highway funds apportioned to the state for the most recently completed fiscal year. (Projects mainly involved in the installation of an intelligent transportation systems [ITS] must cost at least $30 million.) Projects must also be classified within the following categories:

- Surface transportation projects;
- International bridge or tunnel projects;
- Intercity passenger bus or rail facilities and vehicles, including those owned by Amtrak and components of magnetic levitation transportation systems; or
- Publicly owned intermodal surface freight transfer facilities, provided that the facilities are (a) located on or adjacent to the National Highway System and (b) are not seaports or airports.

Public or private applicants for credit assistance are required to submit applications to the U.S. DOT in order to be considered for approval. The U.S. DOT requires a non-refundable initiation charge for each project applying for credit assistance under TIFIA. The amount of credit assistance that may be provided to a project is limited to 33 percent of eligible project costs.

6.1.2 Railroad Rehabilitation and Improvement Financing Program (RRIF)

Under this program the Secretary of the Department of Transportation may provide direct loans and loan guarantees to state and local governments, government-sponsored authorities and corporations, railroads, and joint ventures that include at least one railroad. The program has a funding limit of $3.5 billion in aggregate unpaid balance, with $1.0 billion reserved for non–Class I railroads. In order to be eligible, the proceeds from a direct loan or loan guarantees must be used to:

- Acquire, improve, or rehabilitate intermodal or rail equipment and facilities, including track, components of track, bridges, yards, buildings, and shops;
- Refinance outstanding debt incurred for the purposes discussed above; or
- Develop or establish new intermodal or railroad facilities.

Direct loans and loan guarantees under this program cannot be used for railroad operating expenses. In approving applications for loans or loan guarantees, priority will be given to projects that:

- Enhance public safety;
- Enhance the environment;
- Promote economic development;
- Enable United States companies to be more competitive in international markets;
- Are endorsed by the plans prepared under section 135 of title 23, United States Code, the state or states in which they are located; or
- Preserve or enhance rail or intermodal service to small communities or total areas.

6.1.3 Railroad Track Modernization Act of 2001

(Note: This legislation is pending before the U.S. Congress.)

Legislation is currently before the U.S. Congress that is titled the Railroad Track Modernization Act of 2001 (H.R. 1020). This legislation would establish a program of direct grants to smaller (Class II and Class III) railroads for rehabilitation and improvement of tracks and related structures, including bridges, to bring the infrastructure up to a level permitting safe and efficient operation, including traffic using the new heavier, 286,000 lb. rail cars being adopted as an industry standard by the large railroads. This legislation would repeal Chapter 221 of Title 49, United States Code (Local Freight Rail Assistance).

For projects to be eligible, the track must have been operated by a Class II or Class III railroad as of the enactment date of the Railroad Track Modernization Act of 2001 and the ratio of benefits-to-costs must be more than 1.0 as calculated by a methodology to be established by the Secretary of U.S. DOT. Grants provided under this program are intended to implement track capital projects as soon as possible.

The maximum federal share would be 80 percent of the project costs. The non-federal share can be provided by any non-federal source in cash, equipment, supplies or other in-kind contributions approved by the Secretary of U.S. DOT.

6.2 Potential Funding Under the Federal Highway Program

6.2.1 National Highway System (NHS)

Provides funds that may be used for construction of connecting highways off the National Highway System to serve railroad freight terminals, intermodal terminals, or related railroad facilities.

6.2.2 Federal Highway Surface Transportation Program (STP)

Provides funds for improvements on certain public roadways. This may include improvements at rail crossings or eliminating crossings by relocating track or constructing bridges. These funds typically pay for 80 percent of the cost, with the remaining 20 percent covered by state or local matching funds. Projects to improve crossings using these funds must compete with all other needed highway improvements.

6.2.3 Federal Highway (STP) Crossing Safety Program

Provides funds for safety improvements at rail crossings on public roads. Typically pays for 90 percent or 100 percent of the cost, with the balance paid by state or local matching funds. Indiana receives about $5 million per year in this funding category.

6.2.4 Federal Highway (STP) Highway Safety Program

Provides funds for safety improvements on certain public roadways, and may include safety improvements at rail crossings. Typically pays for 90 percent or 100 percent of the cost of the work, with the balance paid by state or local funds. Projects to improve crossings using these funds must compete with all other needed highway safety improvements. Indiana typically receives about $15 to $20 million in these funds each year and uses about $10 million per year for rail crossing safety work.

6.2.5 Railroad Crossing Warning Device Upgrades

Indiana has an aggressive program to upgrade warning devices at rail crossings. The program currently budgets approximately $15 million per year for this purpose. At an average cost of about $160,000 per upgrade, this means approximately 90 crossings per year can be upgraded. About $5 million comes from the funds described in section 6.2.3 above, and funds described in section 6.2.4 provide the other $10 million. By federal regulation, priorities are set on a statewide basis considering relative risk and potential benefits at each crossing. This is done using federal rail crossing inventory and accident data along with federal formulas for predicting accident rates at rail crossings and estimating the benefits of each upgrade, plus diagnostic review and other relevant factors. Nearly all upgrades currently take place on local roads, since most state highway crossings already have train-activated flashing lights or gates.

6.2.6 Transportation Enhancement Funds

Provides funds to preserve historic transportation infrastructure, such as rail stations and historic bridges.

6.3 State Financial Assistance Programs

6.3.1 Industrial Rail Service Fund (IRSF)

This is a grant and loan program to provide funding for rail infrastructure improvements, or to assist in purchasing a line threatened with abandonment. The program is aimed at providing assistance to short line railroads and port authorities (funds are not available for use by Class I railroads). The program is administered by the Rail Section of INDOT. In past years, the fund has targeted the upgrade of “excepted track” from the short line. Excepted track is the lowest track safety classification defined by the Federal Railroad Administration and denotes track that is in such poor condition that speed is limited to a maximum of 10 mph.

The fund can be used to:

- Provide loans to railroads that will be used to purchase or rehabilitate real or personal property that will be used by the railroad in providing rail transportation services.
- Pay operating expenses of the Indiana Department of Transportation, subject to appropriation by the general assembly.
- Provide $50,000 annually to the Indiana Department of Transportation for rail planning activities.
- Provide money for the high speed rail development fund.
- Provide grants to railroads owned or operated by a port authority established under IC 8-10-5.
- Make grants to a Class II or Class III railroad for the rehabilitation of railroad infrastructure or railroad construction.

In the case of grants, limits are placed on the amount authorized in each case based on project cost, IRSF balance, and the number of anticipated applicants in any funding cycle.

The fund has been used to, among other activities, upgrade 32 percent of the short line railroad trackage from "excepted" track status to FRA Class 1.

6.3.2 Passive Grade Crossing Improvement Fund

The Passive Grade Crossing Improvement Fund was instituted in 1997, and since then more than $1.5 million in state funds have been made available to local jurisdictions and railroads to fund improvements at passive highway/rail at-grade crossings. Passive highway/rail at-grade crossings do not have automatic train activated warning devices to warn of an oncoming train. Over 2,000 passive grade crossing improvements, in 36 counties, have been implemented under the program. Types of improvements eligible include crossbucks, advance warning signs, pavement marking, overhead streetlights to illuminate a crossing, median barriers, and improvements for better sight distance.

6.4 Private Sector Financing and Cost Sharing

A relatively new approach for financing transportation infrastructure projects is to share construction costs between various beneficiaries of the project. In particular, sharing between public entities and private interests is growing more common. There is no specific format or financing formulas for the organization of "Public/Private" ventures. However, use of federal funds may include required minimum levels of outside financial participation, depending upon the particular program used. The particular make-up of the parties and financial participation is determined on a case-by-case basis.

One of the largest and most complex public-private projects undertaken to date is the Alameda Corridor project linking the rail yards and ports in the Los Angeles region. The $2.46 billion project was financed through a combination of loans and bonds and involved of the Ports of Los Angeles and Long Beach and federal, state, and local transportation agencies. A key component of the construction agreement was the negotiation of user fees to be paid by the railroads. The fees are $15 per loaded 20-foot container, $30 per loaded 40-foot container, $8 per empty container, and $8 for other types of railcars. These fees will be used to pay back the loans and bonds.

Depending upon the nature of the project, private funding participants could be: affected shippers/receivers along the line, local governmental jurisdictions, franchised concessionaires (at passenger stations), and the affected railroad.

7.0 SAFETY TRENDS

7.1 Highway/Railroad Grade Crossing Accident Trends

The highway/railroad grade crossing safety trends presented herein were derived from the Federal Railroad Administration Office of Safety Analysis data displayed at their website (http://safetydata.fra.dot.gov/officeofsafety/Query/Default.asp). These data were summarized into an accident database, which could then be queried to look for trends. The following years were analyzed: 1975, 1985, 1990, 1995, 1998, 2000, and 2001.

In general, there has been a significant decrease in the number of highway/railroad grade crossing accidents during the study period. The same trend follows for the number of accidents with injuries and the number of accidents with fatalities. For example, from 1975 to 2001 accidents dropped from 660 to 147, a decrease of almost 450 percent. Similarly, accidents with injuries dropped from 155 to 44, a decrease of about 350 percent, and accidents with fatalities dropped from 55 to 17, a decrease of about 320 percent. The total number of highway/railroad grade crossing accidents, accidents with injuries, and accidents with fatalities for the study period is indicated in Table 7-1.

Although the actual number of injuries and fatalities has decreased over the years, the percentage of accidents involving an injury or fatality has increased. That is to say, the chance of having an

accident today is much smaller than it was 25 years ago; however, if an accident occurs today, the chance is that it will be more serious than an accident 25 years ago.

Table 7-1 Indiana Highway/Railroad Grade Crossing Accidents

Year	Accidents	Accidents with Injuries	Accidents with Fatalities
1975	660	155	55
1985	425	104	39
1990	313	85	31
1995	269	68	28
1998	195	56	22
2000	194	47	20
2001	147	44	17

In the year 2001, the percentage of accidents with injuries was 30 percent, while in 1975 it was 23 percent. In the year 2001, the percentage of fatal accidents was 12 percent, while in 1975 it was 8 percent.

The percentage of accidents occurring at highway/railroad grade crossings without active (gates and/or flashers) warning devices has had a general downward trend. In the years 2000 and 2001, the percentage was 29 percent, while in 1975 it was 39 percent. The percentage of accidents at a grade crossing with gates has been more volatile in recent years. In the years 1998, 2000, and 2001, the percentage of accidents at gated crossings was 19, 15, and 26 percent, respectively. In 1975 it was 12 percent. The higher percentage probably reflects the higher number of gated crossings in service. The majority of these accidents involve drivers attempting to go around the gates, a particularly dangerous action at crossings with multiple tracks.

In the year 2001, the top five counties in terms of accidents—Lake, Madison, St. Joseph, Marion, and Porter—had 38 percent of Indiana's highway/railroad grade crossing accidents. Lake County, with 27 accidents, had nearly as many as the other four counties combined (28). Lake County has had the highest number of highway/railroad grade crossing accidents in all years studied, and is the only county that was in the top five every year studied. This is because of the relatively high level of population and high level of railroad activity that occurs in Lake County.

8.0 RECOMMENDATIONS

8.1 Action Plan for Funding Improvements

1. Continue to closely monitor the lowest-traffic-density short lines and their continued viability and to develop contingency plans where potentially necessary.

   There are currently 12 short lines with traffic densities below 50 carloads per route mile. These short lines constitute 233 route miles and handled 6,204 carloads in the year 2001, an average of 27 carloads per route mile. These 12 railroads require $12.1 million to achieve the capability for handling cars up to 286,000 lbs. Gross Weight on Rail.

2. Where the future need is apparent, preserve to the extent possible the 1,200-mile short line network by continuing to fund track structure rehabilitation, including upgrading of track structure and bridges to accommodate carloads up to 286,000 lbs. Establish a system of priority for this investment program, utilizing data presented in the Rail Plan. Existing funding levels in the Industrial Rail Service Fund are $1.5 million per year. Section 2.3.2 indicates that nearly $100 million in improvements are needed for 286,000 lbs. capability. At current funding levels, it would take 66 years to address all short line needs. Increased funding of the IRSF should be considered.

8.2 Freight and Passenger Project Investments

3. Examine potential of diverting some truck traffic from the Indiana highway network by commencing a study of feasibility of short haul intermodal trailer/container service between Louisville, KY, and Chicago, IL, in the I-65 corridor. The study should address the commercial structure of such a service, the preferred rail route, facility locations, alternatives to trackage rights fees, the role of Hoosier Lift intermodal terminal at Remington, IN, interline connections, and a capital program for route rehabilitation, including vertical clearance requirements. Coordinate this study with future plans for expanded rail passenger service to determine where the investment creates the most synergy for both freight and passenger service in Indiana.

8.3 Safety

4. Enhance safety at rail-highway at-grade crossings by continuing and expanding the existing at-grade crossing closure program, using the closure criteria found in 105 IAC 5-10. For those areas having numerous highway/rail at-grade crossings, the “corridor “ approach could be used. The corridor approach would study the affected highway/rail at-grade crossings as a network, and make decisions regarding closing crossings and improving remaining crossings as a coordinated highway traffic flow activity.

5. Evaluate the attention focused on highway/rail at grade crossings, warning devices, and associated laws provided in drivers license examinations and driver education classes (possibly through a driver survey). Generally, the public is not cognizant of a train’s size, momentum, and stopping limitations because exposure to the railroad industry is much less now than in past years. The importance of obeying warning devices and the dangers of crossing railroad tracks, especially at multiple track crossings where a second train may be approaching just after a first train has passed, is as valid today as in the past.

8.4 Intermodal Freight and Passenger Facilities

6. Examine the potential for a public/private partnership to design and construct a new passenger station at Michigan City. Potential participants include the state, Amtrak, private concessionaires, local government, etc.

8.5 Other Recommendations

7. Establish a regular coordination program with the Indiana Port Commission and other public port authorities to promote and facilitate intermodal interface with rail in support of Indiana industries.

8. Establish regular coordination with the Indiana Department of Commerce for assisting with industrial development issues that affect rail carriers, as well as to keep informed of changing industrial trends that will affect the Indiana rail network, such as anticipating changes in grain marketing and logistics.

9. Continue financial and technical support of state and regional passenger rail planning activities. As funding becomes available, begin Draft Environmental Impact Statement and Preliminary Engineering necessary to construct the Midwest Regional Rail System in Indiana.

10. Review on-time performance of Amtrak service in Indiana to determine extent to which inadequacies of rail infrastructure in Indiana is a contributing factor. On-time performance is a necessary ingredient in achieving ridership growth of existing trains and the promotion of future expansion.

11. Pursue aggressive public financing support for rail projects that have demonstrable benefits to the Indiana transportation system, including reductions in traffic choke points,

enhanced safety, and improved air quality. Leverage these public investments with rail carriers to reduce historic barriers to intermodalism and thereby promote a more seamless network for both freight and passenger traffic to and through Indiana. The recently completed Alameda Corridor in southern California is a prototype of such investments.

12. Establish regular formal meetings with railroads, including Amtrak, shippers, and other stakeholders, such as MPOs, at least annually. Formal meetings with railroads should occur more frequently to address specific types of issues such as railroad capital plans, state investment plans, safety, and service issues. Similar coordination should be formalized with Departments of Transportation in adjacent states.

APPENDIX A - RAILROAD TERMINOLOGY

Abandonment	The permanent ceasing of operations on a track, route, or service
Alignment	The geographical line upon which a route, or a specific track, is centered
Automatic Block System	A system of traffic control where the presence of a train completes a circuit between the rails that causes the signal to indicate its presence to a following train.
Break Bulk	The unloading and distribution of a portion or all of the contents of a ship, rail car or truck.
Block Signals	Traffic signals that govern the movement of trains so that a safe distance between them is maintained.
Class 1 Track	The speed limit is 10 mph for freight trains, and 15 mph for passenger trains. See **Track Classes.**
Class 2 Track	The speed limit is 25 mph for freight trains, and 30 mph for passenger trains. See **Track Classes.**
COFC	Container-on-flat-car; intermodal service where only the "box" is carried on a rail car. The bogie (wheel set), and in some cases the chassis is left behind.
Common Carrier	An entity held out to the general public to transport property and/or passengers for compensation in intrastate, interstate or foreign commerce, with varying degrees of regulation, in accordance with the Interstate Commerce Act, as amended.
Covered Hopper	A rail car that carries bulk commodities in one or more closed compartments, to protect them from moisture and other forms of contamination
Direct Train Control	A traffic control procedure wherein trains are operated in accordance with instructions, usually in writing, that are received directly from a dispatcher
Double-Stack Freight Service	The transport of two intermodal containers, one atop the other, on one platform of an intermodal rail flatcar. A vertical clearance of 20'6" is normally required for two high cube containers.
Drayage	Pick-up or delivery by truck to or from a rail intermodal terminal
Excepted Track	A track of less than Class 1 standards where limited operations are permitted. Speed must not exceed 10 mph, revenue passenger operations are prohibited, and no train may contain more than 5 cars placarded for Hazardous Materials. See **Track Classes.**
Haulage Rights	Rights granted by one railroad to another to provide for the movement of the tenant's cars in the grantor's trains, usually for a fee (see **Trackage Rights**)
Hazardous Materials	Substances or materials that the U.S. Secretary of Transportation has determined are capable of posing an unreasonable risk to human health, safety, and property when transported in commerce, as designated under 49 Code of Federal Regulations Parts 172 and 173.
Interchange	The physical point and contractual agreement by which two or more railroads connect for the purpose of exchanging freight traffic.
Interlocking	An arrangement of switch, lock, and signal devices located where railroad tracks cross, join, or separate. The devices are interconnected so that their movements must succeed each other in a predetermined order, thereby preventing conflicting movements.
Intermodal Facility	A paved or unpaved site consisting of tracks, lifting equipment, and a control point for the receiving and dispatching of trailers and containers between rail and highway, or between rail and marine modes of transportation.
Just-In-Time (JIT)	An element of a manufacturing or production process in which the inventory and materials handling of components is minimized by means of relying on the carefully scheduled arrival of components from suppliers.
Lighter	A flat-bottom boat designed for cross-harbor or inland waterway freight transfer.
LTL (Less-Than-Truckload-Lot)	Shipments weighing less than the truckload minimum which normally require truck terminal trans-loading prior to and following the line haul segment.
O-D Pair	A reference to the terminals where a given shipment originates and is destined

Rationalization	The process of sizing a rail network to meet changed demands for service.
RoadRailer®	A manufacturer's patented technology for dual mode rail-highway trailers that can be coupled for rail movement without utilizing a standard railcar, but rather are coupled together with two-axle rail wheel sets. See Triple Crown Services.
Roll-On/Roll-Off (Ro/Ro)	A feature designed in a specially constructed vessel that allows cargo to be loaded and unloaded through doors in the vessel's hull. This feature allows cargo to be rolled in and out of the vessel.
Route Miles	The length of the route, or routes, regardless of the number of parallel tracks.
Through Train	A train operating between principal terminals or yards, usually with few stops to set off, pick up, or switch freight cars.
TOFC	Trailer-on-flat-car; intermodal service, commonly known as "piggyback," where the entire trailer, including the bogie (wheel set), is carried on a rail car.
TOFC Trailer	A highway trailer with a reinforced frame to permit lifting from the bottom without structural damage. Conventional highway trailers cannot withstand such lifting without damage.
Ton-Mile	Basically, one ton transported a distance of one mile. The standard measure of output for freight transportation, reflecting the collective weight of shipments and the distance they are hauled.
Track Classes	Ratings of track condition in accordance with Federal Track Safety Standards. See **Class 1, Class 2,** and **Excepted track**
Track Miles	The collective length of all of the tracks on a route, or routes.
Trackage Rights	Rights granted by one railroad to another to operate on the former, usually for a fee, usually with the tenant's crews and locomotives, and usually without rights to serve customers along the line (see **Haulage Rights**)
Traffic Control System	A signaling system where a dispatcher at a remote location controls signals and switches, and the routing of trains.
Tri-Level Rail Car	A flatcar with a superstructure supporting two decks above the deck of the car, used for transporting motor vehicles, normally between 12 and 15 vehicles per railcar.
Triple Crown Services	Advanced truckload services, mainly utilizing RoadRailer® equipment. When in truck mode, RoadRailers® operate on regional highways; when in rail mode, RoadRailers® operate principally via Norfolk Southern lines.
Truckload Lot (TL)	The quantity of freight necessary to qualify for a TL rate, normally in excess of 10,000 lbs.. Truckload operations normally permit the bypassing of intermediate terminals.
Unit Train	A train consisting entirely of one commodity, or of containers/trailers, that bypasses intermediate switching yards between origin and destination
Yard (Freight)	Trackage within a specified area used for storing cars, or for making up trains.

APPENDIX B - SHORT LINES IN INDIANA

Figure B-1 Short Lines – Northern and Central Indiana

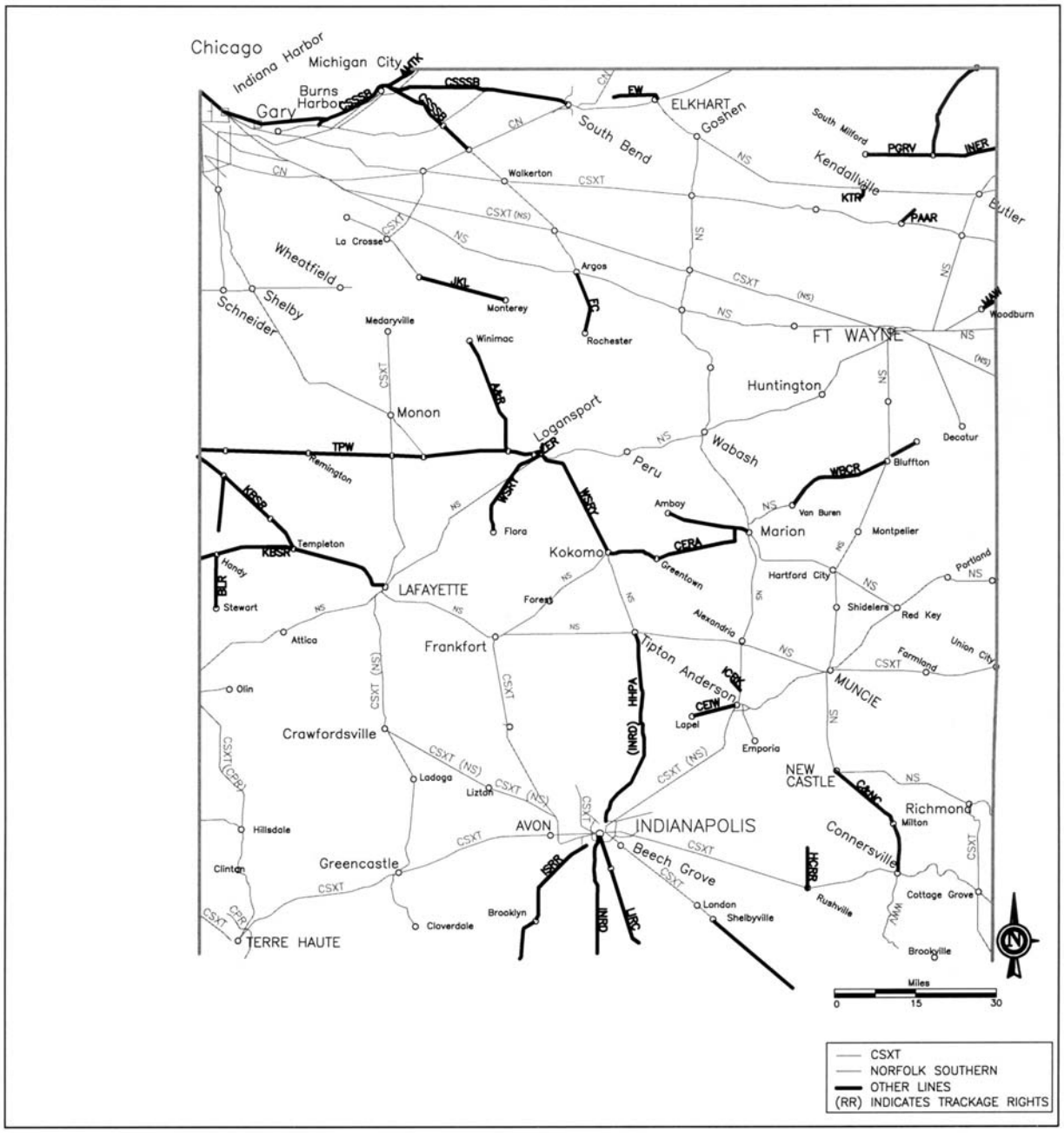
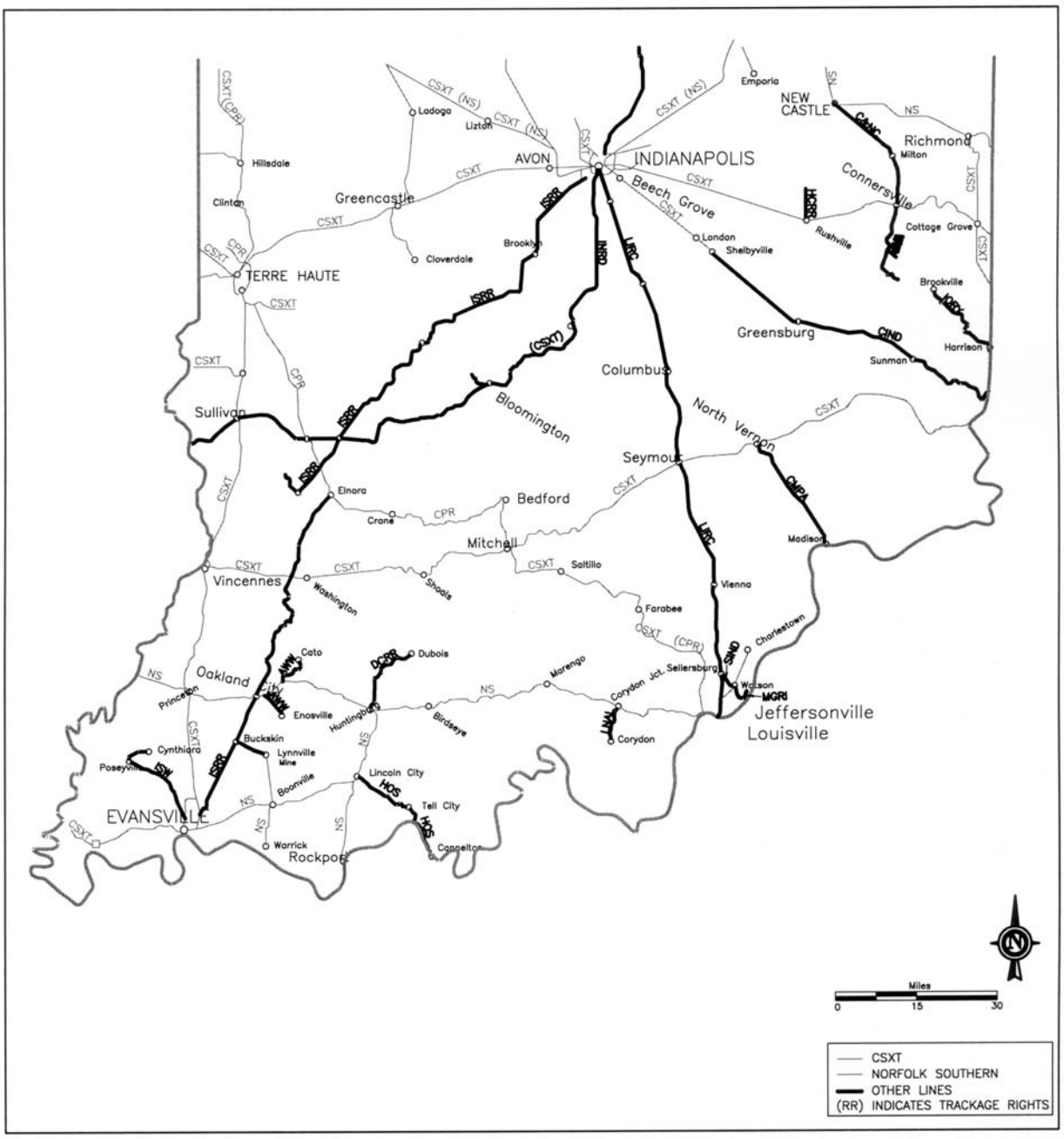


Figure B-2 Short Lines – Southern and Central Indiana



APPENDIX C – INDIANA COUNTIES SERVED BY SHORT LINES

Served by Short Lines

Allen
Bartholemew
Benton
Brown
Carroll
Cass
Clark
Davies
Dearborn
Decatur
Dekalb
Dubois
Elkhart
Fayette
Franklin
Fulton
Gibson
Grant
Green
Hamilton
Harrison
Henry
Huntington
Jackson
Jasper
Jefferson
Jennings
Johnson
Knox
LaGrange
Lake
La Porte
Madison
Marion
Marshall
Miami
Monroe
Morgan
Newton
Noble
Owen
Perry
Pike
Porter
Posey
Pulaski
Ripley
Rush
St. Joseph
Scott
Shelby
Spencer
Starke
Steuben
Sullivan
Tipton
Vanderburg
Warren
Warrick
Wayne
Wells
White

Served by Short Lines Exclusively

Bartholemew
Benton
Brown
Decatur
Fulton
Franklin
Hamilton
Jefferson
Johnson
LaGrange
Monroe
Morgan
Owen
Perry
Steuben

APPENDIX D – INDIANA CITIES AND TOWNS SERVED BY SHORT LINES ONLY

LaGrange County
South Milford

Steuben County
Fremont
Angola
Hudson
Ashley
Steubenville

DeKalb County
Auburn

Pulaski County
Winamac

Fulton County
Rochester

Newton County
Kentland
Goodland

Jasper County
Remington

White County
Wolcott
Burnettsville

Cass County
Royal Center
Walton
Galveston

Miami County
Amboy
Converse

Huntington County
Warren

Benton County
Earl Park
Fowler
Oxford
Boswell
Otterbein

Tippecanoe County
West Lafayette

Carroll County
Flora
Bringhurst

Howard County
Greentown

Grant County
Herbst
Sweetser
Van Buren

Hamilton County
Atlanta
Millersburg
Arcadia
Cicero
Noblesville
Fishers

Madison County
Lapel

Marion County
Southport

Wayne County
Cambridge City

Morgan County
Morgantown
Mooresville
Brooklyn
Martinsville

Johnson County
Bargersville
Franklin
Greenwood
Whiteland
Edinburg

Shelby County
St. Paul

Decatur County
Greensburg

Franklin County
Metamora
Brookville
Cedar Grove

Dearborn County
West Harrison

Ripley County
Batesville
Sunman

Owen County
Gosport
Spencer

Monroe County
Bloomington

Bartholemew County
Columbus
Jonesville

Sullivan County
Dugger

Green County
Bloomfield
Worthington
Switz City

Knox County
Sandborn

Daviess County
Plainville

Jackson County
Crowthersville

Jennings County
Vernon

Pike County
Petersburg

Dubois County
Dubois
Jasper

Scott County
Austin
Scottsburg

Jefferson County
Madison
Dupont

Harrison County
Corydon

Clark County
Sellersburg

Perry County
Troy
Tell City
Cannelton

Warrick County
Elberfield

Posey County
Poseyville
Cyntiana

APPENDIX E – A RAILROAD FUNDING BENEFIT METHODOLOGY

Presented herein is a methodology that will help to analyze the benefits for future railroad infrastructure projects being considered for funding. The following is a description of the railroad investment methodology spreadsheets. This evaluation has been developed in order to compare two alternatives. The first alternative is the proposed Project, for example, rehabilitation of a short line railroad. The second is the No-Project alternative defined as the best estimate of what will happen if the project is not undertaken or the line is abandoned all together. The No-Project alternative assumes a shift to truck transportation.

The spreadsheets show annual impacts.

EXAMPLE CASE

In order to demonstrate how the spreadsheets function, an example case has been developed. Spreadsheets having data reflecting the Example Case are included herein. Although the Example Case uses fictitious numbers, the length of the short line railroad (33 miles) is the average length of Indiana short lines, and the total tonnage involved (165,000 tons) represents a 50-car-per-mile traffic base.

The following are the parameters of the Example Case.

Project Case (Short Line railroad remains in operation)

- Commodities transported:
  - Corn 65,000 tons
  - Wheat 100,000 tons
- Distance hauled to Class I railroad interchange:
  - Corn 33 miles
  - Wheat 16 miles
- Average truck distance from farms to short line railroad elevators:
  - Corn 5 miles
  - Wheat 4 miles

No Project Case (Short Line discontinues operation)

- Commodities transported:
  - Corn 65,000 tons
  - Wheat 100,000 tons
- Average distance to Class I railroad elevator:
  - Corn 100 miles
  - Wheat 75 miles

ECONOMIC BENEFITS AND COSTS

Project Transportation Costs

This spreadsheet quantifies the difference in transportation costs that will occur should the No-Project program be implemented. The Project spreadsheet accounts for both the truck transportation used to get the commodities from farm to short line railroad elevators and the railroad transport necessary to get the commodities to a Class I interchange. Determining a common end point for both the Project and No-Project options is highly subjective. For the sake of example, transport to a Class I railroad was chosen as a common endpoint for both cases (for truck, to an elevator on the Class I; for the short line, an interchange track).

Values are provided for railroad ton-mile costs and truck ton-mile costs. These values are based on conversations with traffic representatives of grain shippers. The example spreadsheet uses a value of 0.03 cents per ton-mile for rail and 0.079 cents per ton-mile for truck. These rates are reflective of relatively short haul distances of about 100 miles. Representative rates for longer hauls (500 miles or so) are about 0.019 cents per ton-mile for rail and 0.057 cents per ton-mile for truck. Default factors representing very general, nationwide averages are also provided. The railroad cost/ ton-mile default factor is from *Railroad Facts – 2001 Edition*; Association of American Railroads. The truck cost/ton-mile default factor is based on a five-axle combination truck having a 28.5-ton capacity, and is from *Paying Our Way; Special Report 246*; Transportation Research Board.

Inputs required:
- Annual tonnage shipped
- Miles shipped (Rail and Truck)
- Transportation cost per ton mile
  - Short Haul (100 miles ±)
    - Rail - 0.03
    - Truck - 0.079
  - Longer Haul (500 miles ±)
    - Rail - 0.019
    - Truck - 0.057
  - National Default Value
    - Default value, Rail - 0.025
    - Default value, Truck - 0.043

Output: Annual project transportation costs

No-Project Transportation Cost

This spreadsheet accounts for the truck transportation that would take place if short line railroad service were discontinued.

Inputs required:
- Annual tonnage shipped
- Miles shipped
- Transportation cost per ton mile
  - Truck - 0.079

Output: Annual No-Project transportation costs

Increased Transportation Cost

This spreadsheet determines the added transportation costs by subtracting the total cost from the Project transportation spreadsheet from the total cost on the No-Project transportation spreadsheet.

Inputs required: Cost totals from the Project and No-Project spreadsheets

Output: Increased transportation costs

Economic Impact

Increased Transportation Cost is used as an input to determine annual economic loss. Increased transportation cost is a primary impact because farmers, through reduced prices for their commodities, most frequently absorb that cost.

Secondary impacts occur when direct impacts are spent and re-spent within the local economy. In the absence of increased transportation costs, the money that would have been spent on those costs is considered discretionary income for the farmers—money that can be spent for eating out, leisure time activities, clothes, etc. In essence, the increased transportation cost is viewed as economic leakage from the local community.

Secondary impacts are quantified in the methodology by using a factor of 2 multiplied against increased transportation cost. The result represents the amount of economic activity that would have been created if the direct impacts remained in the local economy. The factor is based upon data presented in *Economic Impact of Railroad Abandonment: Carrington-to-Turtle Lake Rail Line*; North Dakota State University.

Inputs required: Increased transportation costs - from previous table

Output: Annual economic impact (loss)

Employment and Business Costs

Cessation of rail service may cause unemployment and/or a business to relocate. On the other hand, keeping rail service may help attract business and maintain employment. The spreadsheets at the end of this appendix account for these possibilities. Data from the railroad and the shippers, supplemented by field research in the local communities, should provide the input information for these spreadsheets.

Unemployment Cost

Inputs required: Numbers of job losses
Average weeks out of work
Average weekly pay

Output: Total lost labor

Business Relocation

Inputs required: Cost of moving equipment and inventory
Cost of moving key employees
Breaking current lease

Output: Total relocation costs

Employment Benefits

Inputs required: Number of jobs gained
Increase in working weeks (per year)
Average weekly pay

Output: Total gained labor

HIGHWAY BENEFITS / COSTS

Increased Road Maintenance & Infrastructure Projects

The costs associated with shifting traffic from rail to truck, along rural and in some cases urban roadways, should include those associated with increased roadway maintenance due to truck traffic's high impacts on roadways. Truck trips are determined by dividing the annual commodity tonnage by a factor of 28.5. This factor represents the tons capacity of a five-axle combination truck. Default factors for the maintenance costs of various classes of highways are presented below. (Tolliver: *Agriculture Transportation for the 21st Ce*ntury, 7/27/98). Based on the assumption that agribusiness trucks will return empty, truck trips should be calculated as one-way. The wear and tear to highways caused by empty trucks is generally offset by user taxes.

The spreadsheet provides a column to account for capital infrastructure improvements that may be required for the railroad and highway network. The cost of infrastructure projects must be calculated separately. Rehabilitation costs to bring a railroad to 286,000 lbs. capability can be estimated by using the methodology presented in the Indiana DOT's *Rail Plan - 2002*. It should be noted that the methodology spreadsheets reflect annual impacts; therefore, infrastructure capital costs should be the annual amortized amount.

Inputs required:
- Number of truck trips (per segment)
- Distance (miles)
- Highway Maintenance cost per mile
  - Default values
    - $0.51 – Minor Arterial
    - $1.71 – Major Collector
    - $2.67 – Minor Collector
- Cost of roadway/railway infrastructure projects

Output: Total Cost, and Additional Infrastructure Costs

Road and Fuel Tax

Additional truck traffic results in increased user revenues from the trucking industry, including fuel taxes. A default value of 5.6 miles per gallon is used, which is based on the performance of a truck having a loaded capacity of 28.5 tons.

Inputs required:
- Number of truck trips (per segment)
- Distance (miles)
- Miles per gallon of diesel fuel
  - Default value - 5.6 mpg
- Diesel fuel tax (per gallon)

Output: Total tax revenue without project

ENVIRONMENTAL

Air Quality & Emissions

In this series of spreadsheets a comparison of emissions between Project and No-Project is developed. The railroad fuel efficiency factor represents the gross ton-miles per gallon of fuel used. In the year 2000 this factor was 826.05 (*Analysis of Class I Railroads, Year 2000*: Association of American Railroads). Emissions factors for rail and trucks are those used in performing similar analysis as presented in the Railroad Control Application Environmental Report (CSX/NS – Conrail, Proposed Action).

Inputs required:	Tonnage shipped by truck Tonnage shipped by rail
Output:	Total gallons of diesel fuel consumed / Emissions increase

---

Parsons developed this Railroad Benefit Funding Methodology as a component of the Indiana Rail Plan – 2002

Economic Benefits and Costs

Project (Railroad continues in business)

	Railroad Cost Ton/mile	Railroad Miles	Annual Railroad Tons	Total Railroad Cost	Truck Cost Ton/mile	Truck Miles	Annual Truck Tons	Total Truck Cost	Total Transport Cost
Corn	$0.030	33	65,000	$64,350	$0.079	5	65,000	$25,675	$90,025
Wheat	$0.030	16	100,000	$48,000	$0.079	4	100,000	$31,600	$79,600
				$0				$0	$0
				$0				$0	$0
				$0				$0	$0
				$0				$0	$0
TOTAL									**$169,625**

No Project (Railroad abandoned, transfer to trucks)

	Truck Cost Ton/ Mile	Truck Miles	Annual Truck Tons	Total Transport Cost
Corn	$0.079	100	65,000	$513,500
Wheat	$0.079	75	100,000	$592,500
	$0.000			$0
	$0.000			$0
	$0.000			$0
	$0.000			$0
TOTAL				**$1,106,000**

Inreased Transportation Cost

Total Transportation Costs		Increased Transport Costs
Project	No Project	
$169,625	$1,106,000	**$936,375**

Economic Impact

Increased Transport Costs	Secondary Impacts	Annual Economic Loss Impact
$936,375	$1,872,750	**$2,809,125**

Economic Benefits and Costs (Continued)

Unemployment Costs -
No Project (Railroad abandoned, transfer to trucks)

Business	* Number of Jobs Lost	* Average Weeks out of Work	* Average Weekly Pay	Total Lost Labor Output
X	12	6	$500	**$36,000**
Y	20	6	$500	**$60,000**
				$0
				$0
				$0
TOTAL				**$0**

Business Relocation -
No Project (Railroad abandoned, transfer to trucks)

Business	** Cost of Moving Equipment and Inventory	** Cost of Moving Key Employees	** Breaking Current Lease	Total Cost for Relocation of Businesses
X	$8,000	$80,000	$36,000	**$124,000**
Y	$22,000	$62,000	$12,000	**$96,000**
				$0
				$0
				$0
TOTAL				**$220,000**

Employment Benefits -
Project (Railroad continues in business)

Business	* Number of Jobs Gained	* Increase in Working Weeks (per year)	* Average Weekly Pay	Total Gained Labor Output
X	42	34	$500	**$714,000**
Y	21	26	$500	**$273,000**
				$0
				$0
				$0
TOTAL				**$987,000**

NOTES

* Data can be obtained from the local areas unemployment office and from local communities.
{For rural communities information may also be obtained from the U.S. Department of Agriculture and the Rural Business - Cooperative Service
** Local communities and businesses impacted by the shipping industry
*** Data may also be obtained from the US Census

Highway Benefits and Costs

Increased Road Maintenance & Infrastructure Projects - Primary

	Comodity Annual Tons		Tons/ truck	* Number of Truck Trips (per segment)		Distance (miles)		Annual Truck Miles		** Roadway Maintenance Cost per Mile		Infrastructure Projects Roadway**	Rail	Total Cost	
	No Project	Project		No Project	Project	No Project	Project	No Project	Project	No Project	Project	No Project	Project	No Project	Project
Corn	65,000	65,000	28.5	2,281	2,281	100	5	228,070	11,404	$2.67	$1.71	0	0	**$608,947**	**$19,500**
Wheat	50,000	100,000	28.5	1,754	3,509	65	4	114,035	14,035	2.67	1.71			**$304,474**	**$24,000**
Wheat	50,000		28.5	1,754	0	10		17,544	0	1.71				**$30,000**	**$0**
			28.5	0	0			0	0					**$0**	**$0**
			28.5	0	0			0	0					**$0**	**$0**
			28.5	0	0			0	0					**$0**	**$0**
			28.5	0	0			0	0					**$0**	**$0**
TOTAL								**359,649**	**25,439**					**$943,421**	**$43,500**

Road and Fuel Tax - Secondary

	* Number of Truck Trips (per segment)		Distance (miles)		*** Miles per Gallon of Diesel Fuel	**** Fuel Tax (per gallon)	Total Tax Revenue	
	No Project	Project	No Project	Project			No Project	Project
Corn	0	2281		5	5.6	0.04	**$0**	**$81**
Wheat	0	3509		4	5.6	0.04	**0**	**100.257**
Corn	2,281		100		5.4	0.04	**1689.63**	**0**
Wheat	1,754		65		5.4	0.04	**844.519**	**0**
Wheat	1,754		10		5.4	0.04	**129.926**	**0**
					5.4	0.04	**0**	**0**
					5.4	0.04	**0**	**0**
					5.4	0.04	**0**	**0**
TOTAL							**$2,664**	**$182**

Increase in the number of truck registrations if the railroad line was abandoned must be independently calculated.

NOTES

* Local business and shipping companies
** State Department of Transportation
*** Department of Energy
****Federal, State and local government tax information (Federal tax on diesel fuel - .243 cents per gallon, State average - .19)

* Environmental Impacts

Project (Railroad continues in business)

	Railroad Miles	Annual Tons	Annual Ton Miles	Fuel Efficiency Factor	Total Railroad Gallons Consumed	Factored Railroad Gallons Consumed (X 1,000)
Corn	33	65,000	2,145,000	826.05	2,597	2.60
Wheat	16	100,000	1600000	826.05	1,937	1.94
	1	1	1	1	1	0.00
	1	1	1	1	1	0.00
	1	1	1	1	1	0.00
	1	1	1	1	1	0.00
TOTAL						4.54

Air Quality & Emissions

Total Factored Railroad Gallons Consumed (X 1,000)	** Emission Factors (units of pounds of pollutant per 1000 gallons of fuel consumed)					Emission (per Ton)				
	Carbon Monoxide	Nitrogen Oxides	Sulfur Dioxide	Particulate Matter	Lead	Carbon Monoxide	Nitrogen Oxides	Sulfur Dioxide	Particulate Matter	Lead
4.54	62.90	566.40	36.70	14.30	0.0012	**0.14**	**1.29**	**0.08**	**0.03**	**0.00000**

No Project (Truck)

Annual Truck Miles			** Emission Factors (grams / truck mile)					Emission (per Ton)				
No Project	Project	Increased Truck Miles	Carbon Monoxide	Nitrogen Oxides	Sulfur Dioxide	Particulate Matter	Lead	Carbon Monoxide	Nitrogen Oxides	Sulfur Dioxide	Particulate Matter	Lead
359,649	25,439	334,210	8.63	19.68	0.64	2.29	0.0001	**3.18**	**7.24**	**0.24**	**0.84**	**0.00004**

Emissions Increase	Carbon Monoxide	Nitrogen Oxides	Sulfur Dioxide	Particulate Matter	Lead
No Project (Truck)	3.18	7.24	0.24	0.84	0.00004
Project (Railroad in service)	0.14	1.29	0.08	0.03	0.00000
Emission Increase	**3.03**	**5.96**	**0.15**	**0.81**	**0.000034**

NOTES

* All environmental information could be obtained from contacting the Environmental Protection Agency

** United States Environmental Protection Agency, February 11, 1997. 40 CFR Parts 85, 89 and 92. Emission Standards for Locomotive and Locomotive Engines; Proposed Rule.